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ABSTRACT

As part of a longitudinal examination of the New Zealand junior school (which provides the first 3 years of schooling to New Zealand pupils), a study of organizational patterns in a random selection of schools and of children's school experiences was conducted. Class activities in a sample of junior school classrooms located in seven state schools, two integrated schools, and one private school were videorecorded. The videorecordings and interviews with teachers and children provided information on the proportion of time spent on different areas of the curriculum; the kind of groupings in which children were taught; and the average amount of time spent in class, small groups, or individual groupings. The ways in which children were taught to think intelligently and behave morally were also studied, as were children's reactions to school. Initial study findings, based on videorecordings made in 1989 of classrooms containing 5-year-old children, included the following: (1) 43% of the day was spent on literacy acquisition, 7% on oral language skills, and 13% on mathematics; (2) approximately half the day was spent in whole class groupings; (3) thinking skills were taught primarily during teacher-led sessions on the study of written texts; and (4) although all schools presented similar moral concepts, the ways in which the concepts were presented constituted the major differences between state, integrated, and private schools. (AC)

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A STUDY OF CLASSROOMS CONTAINING FIVE-YEAR-OLDS

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1991

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ABSTRACT

This is a report about classrooms containing 5-year-olds. The classrooms were located in 7 state schools, 2 integrated schools and 1 private school. Observations were made by videocamera. The result was over 40 hours of observations of classroom life stored on videotape. The transcript for a single school produced up to 100 pages of text. The present report is based on analysis of the transcripts, observations of the videorecords and interviews with teachers and a sample of children. The study provides information on the proportions of time spent on different areas of curriculum, the kind of groupings in which children were taught and the average amount of time spent in class, small groups, or individual groupings. The ways in which children are taught to think intelligently and to behave morally are illustrated with extracts from the transcripts. Based on the child interviews the reactions of children to various aspects of school and the curriculum are reported.

SUMMARY

1. Using a conservative measure of literacy as the study or production of written texts it was shown that 43 percent of the school day for five-year-olds was spent on acquiring literacy.

2. A further 7 percent of the school day was spent on experiences and use of oral language. These may arise from earlier reading and writing or may act as preparation for future work.

3. Using a conservative measure of mathematics as a block of time given to mathematics, an average of 13 percent of the day was spent on this curriculum area.

4. Because the junior school curriculum is `seamless' learning events may include more than one curriculum area. Thus the amount of time spent by children in mathematical activities or on the reading of texts is greater than that shown in a simple time analysis. For example, during `choosing time' many children chose to read texts, or to use mathematical equipment.

5. Children were grouped in different ways during the course of the day. Using a simple classification of class, small group and individual grouping it was shown that approximately half the day was spent in a whole class grouping and of the remainder of the day more time was spent in group work than in individual work.

6. Teachers, as more experienced members of the culture, provided children with cultural capital regarding what to think about, how to behave and how to think. The school curriculum outlines what to think about, and has always included `moral instruction' in some form. `How to think', however, is a consequence of the way in which subjects are taught. On entry to school 5-year-olds are inducted into particular ways of reasoning. This induction takes place mainly during teacher led class sessions on the study of written texts.

7. Although all schools presented similar moral concepts such as caring for others and respect for the environment, the way in which these were presented constituted the major differences between state, integrated and private schools.

8. The interviews with children showed that 5-year-olds develop narrative `scripts' of the school day based on their personal experiences. They also express opinions of school activities which incorporate social judgements acquired from others.

C H A P T E R 1

BACKGROUND TO THE STUDY

Research projects have histories. This one began in 1985 when the then Minister of Education, the Hon. Russell Marshall asked NZCER to carry out a study of the implementation of the phased introduction of a 1:20 staffing ratio in junior schools which was to start in September of that year.

At the same time it was suggested to NZCER by the Director General of Education, W L Renwick, that the study of the 1:20 policy should be considered as a starting point for a more extended examination of the New Zealand Junior School (the first three years of schooling). Accordingly the study was designed as a series of modules each examining a different aspect of the junior school but each one related to the rest. The modules were envisaged as follows:

Deciding	*Promotion*	*Mapping*	*Tracking*
Decision making in 1:20 schools	Promotion patterns in schools of differing size, staffing, etc.	Organisational patterns in a random selection of schools and how children experience this organisation	Survey of a sample of children over 3 years in first instance

The report of the implementation of the 1:20 policy was published in McDonald et al., (1989). The study of promotion has been reported in various publications (e.g., McDonald, 1988) and as the study of the demography of the classroom, this latter work has been extended to a critique of the use and interpretation of age norms in standardised tests (McDonald, 1991a) and the implications of promotion decisions for Maori youth (McDonald, 1991b). The study reported here is the 'mapping' study. A `tracking' study is being carried out by Cathy Wylie.

The Views of `Expert Witnesses'

When the Junior School Project was first set up we sought opinions from a number of `expert witnesses' on the qualities of a good junior school teacher and the characteristics of good junior school programmes.

Although there was a division of opinion over whether 'motherly warmth' was a necessary characteristic of a junior school teacher, several mentioned that the teacher must be caring. The point on which there was the greatest consensus was that teachers should support children's learning rather than direct it.

Although nobody supplied a blueprint of how management should be carried out, the importance of management was stressed. Knowledge of the curriculum, familiarity with the resources available and ability to gauge the needs of the new entrant were also mentioned.

One person spoke of the situation in which a child might be the only Maori child in a class, of the need for symbols to which Maori children can relate and of the importance of a trusting relationship between teacher and parents. Another person said, 'I don't believe in any sort of classic image of the kind of person that is appropriate to teach beginners. The focus from this perspective should be on the interaction between teacher and child.'

We took these points into account in the conceptualisation of the research and in the analyses. The comment about the possibility of a child being the only Maori child in a class made us later look at our data to find examples of children who were the only representatives of their ethnic group in the class and examples of classes in which there was a group of children from the same ethnic group. In this way we located some Samoan children whose behaviour was analysed (Meiklen, 1991).

Observations by Advisers to Junior Classes

In 1986 a trial study of junior school classrooms was conducted. Advisers to Junior Classes used a pencil and paper observation schedule to observe a child in a junior class over the course of a day (McDonald, 1987).

Following their observations the advisers were asked to write down five significant things which they had observed. The comments reflected not only what an adviser had observed but also what an adviser thought it important to comment on. By looking at what people as a group think is significant in a particular situation, it is possible to build up a picture of the *characteristics* of teaching in the junior school together with the observers' *expectations* of junior school classrooms.

The advisers' comments tended to focus either on the child, or the teacher or the programme. However, despite a difference in focus the advisers might be saying much the same thing about learning and teaching. For example, 'child didn't have enough interesting things to extend her' - 'teacher didn't provide enough interesting things to extend child'.

A summary of the main points made by the advisers follows:

The Teacher

* Should not dominate the child's learning but give the child an opportunity to make individual choices.

* The class should not be regimented.

* Direction is preferable to overt control.

* Should be well prepared.

* Should give children help when they show they need it but not when they don't need it.

* There should be a balance of teacher directed and child initiated activities.

* The ebb and flow of interaction should be under a teacher's discreet control.

* Teacher should provide a good supply of materials.

* Materials and ideas should be at a sufficient level of interest.

* Teacher should establish routines.

* Teacher should give children time to practise what they have learned.

* Teacher should give children time to complete tasks.

* Teacher should provide an appropriate balance of new learning and practice.

* Teacher should give individual attention.

The Child

* Should be in a calm emotional state.

* Should be able to interact with other children and with teacher.

* Should know the social rules of the classroom.

The Programme

* Organisational factors such as keeping the routines are important. Advisers frequently mentioned the use of time (time on task; enough time to finish an activity;

children not wasting time).

* Children should be personally involved in activities.

* The children should be 'extended'.

Research in Classrooms

This is a study of classrooms. In addition to conducting the pilot study just described a search was made for studies relevant to young children in classrooms. Nuthall and Alton-Lee (1990) have argued that:

> ... the findings of classroom research need to be embedded in an evolving explanatory theory of classroom learning that is of practical value to teachers... (p.547)

These authors review the changes in the way in which classroom research has been conceptualised over the past 30 years. They say that:

> The focus has shifted from a limited concern with teacher behaviour and its apparent effects on pupils (the process-product paradigm) to a broader concern for all the factors that affect pupil learning in the classroom (p.548)

Nuthall (1990) has criticised the implications for action that are commonly drawn from traditional designs used in classroom studies. His point is that traditional designs may show that teachers treat certain categories of pupil differently from others but that they do not show that changing this pattern will result in better learning because that was not the original research question.

Bennett (1987) also has criticised the research designs and the assumptions of studies of teaching and learning. One of his points is that studies which assume a direct relationship between teaching behaviours and pupil learning carry with them 'an implied denial of the influence of pupils in their own learning' (p.69). Bennett says that classrooms should be conceptualised as 'complex social settings'.

In view of the importance of the early years of schooling, there have been remarkably few studies of what occurs in school classrooms in New Zealand apart from the work carried out by Clay (1985) and her associates at the University of Auckland. Mention must also be made of the studies by Cazden (1988, 1990).

There have been studies of the Reading Recovery programme which is offered at the level of the junior school (e.g., Glynn et al. 1989; Clay, 1990) but this is a tutorial and not a classroom programme. There have also been studies of specific areas of the curriculum such as Beginning School Mathematics (e.g., Young-Loveridge, 1987; Higgins, 1991).

One of the problems of interpreting children's behaviour when the information comes only from particular parts of the curriculum is that one does not know whether the behaviour observed is typical of all classroom events or whether it is specific to the area under study. The project reported here tries to fill this gap in our knowledge by gathering material throughout an entire school day in ten schools which differ in their characteristics. The use of videorecording meant that the observations could be stored and viewed as many times as necessary. The selection of a small number of children for special focus meant that it has been possible to observe children's behaviour in interaction with teachers, with peers, and with resources. The children were also observed in groups of varying size.

Practical Value to Teachers

There is more than one way in which a study such as this can be of value to a teacher. It provides information from a variety of schools on the way in which other teachers teach. It sheds light on what children do when they are working in small groups or alone and without the presence of the teacher. It provides information on the use of time. Information of this kind is likely to be useful also to policy makers, to parents and to teachers in training. The study also records the classroom behaviour of a diverse group of children.

Relevance to Policy

The most immediate application of this report is to the curriculum component of the government's Achievement Initiative. The report shows how the curriculum is taught to five-year-olds in a range of schools. For example, it indicates the levels of reading material being presented by teachers, and practised by children. It provides similar information on mathematics, science, music, and physical education. It indicates the balance of attention given to the different areas of the curriculum.

It goes beyond the structure of the curriculum to provide basic information on the moral and ethical attitudes encouraged in junior school classrooms. It also demonstrates how methods of teaching reading for meaning based on stories are in effect teaching thinking skills in relation to texts.

The findings provide no evidence for a popular view that young children at school `just play'. The five-year-old children who were interviewed generally made a distinction between school work and play. Play is what occurs mainly in the playground. At the same time the study showed that children introduce play-like elements into their learning particularly when they are working in small groups. One of the roles children may incorporate in their play is that of the teacher.

NOTE

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REFERENCES

CHAPTER 1

BENNETT, Neville (1987). Changing Perspectives on Teaching-learning Processes in the Post Plowden Era. *Oxford Review of Education*, 13:1, 67-69.

CAZDEN, Courtney B. (1990). Differential Treatment in New Zealand: Reflections on Reserach in Minority Education. *Teacher and Teacher Education*, 6:4, 291-303.

CAZDEN, Courtney B. (1988). *Interactions between Maori Children and Pakeha Teachers*. Auckland Reading Association.

CLAY, Marie M. (1985). Engaging in the School System : A study of Interactions in New Entrant Classrooms. *New Zealand Journal of Educational Studies, 20:1, May*.

CLAY, Marie M. (1990). The Reading Recovery Programme, 1984-88: coverage, outcomes and Education Board district figures. *New Zealand Journal of Educational Studies*, 25:1.

GLYNN, T.; CROOKS, T.; BETHUNE, N.; BALLARD, K., and SMITH, J. (1989). *Reading Recovery in Context*. Wellington, Department of Education.

HIGGINS, Joanna. (1991). Papers on Junior Mathematics Classroom Research. Paper presented at NZARE Annual Conference, Knox College, Dunedin, 28 Nov - 1 Dec.

McDONALD, Geraldine. (1991a). Henry and Iain Meet the PAT Age Percentile. *New Zealand Journal of Educational Studies*, 26:1, 65-73.

McDONALD, Geraldine. (1991b). Standardised Test Scores and Maori Pupils. In, *Report of Hui for Maori Educators*, Futuna Retreat Centre, Karori, 25-27 March, 1991, Educational Assessment Secretariat, Ministry of Education.

McDONALD, Geraldine. (1988). Promotion, Retention and Acceleration. *set* no. 2.

McDONALD, Geraldine. (1987). Report on Observations Made by Advisers to Junior Schools. Paper presented at Conference of Advisers, Developments in Junior Primary School Classes, Frank Lopdell Centre, Auckland.

McDONALD, G.; PODMORE, V.N.; RENWICK, M.; SMITH, L.; VIZE, J., and WYLIE, C. (1989). *More Teachers, Fewer Pupils. A study of the 1:20 Teacher-Pupil Ratio Policy in the Junior School*. Wellington: NZCER.

MEIKLEN, Victoria. (1991). Insights into the Nonverbal Behaviour of some 5-year-old Samoan Girls. Paper presented at NZARE Annual Conference, Knox College, Dunedin, 28 Nov - 1 Dec.

NUTHALL, Graham. (1990). The Future of Research on Classroom Learning and Teaching. *Input* 12:1, 1-3.

NUTHALL, Graham and ALTON-LEE, Adrienne. (1990). Research on Teaching and Learning: Thirty Years of Change. *The Elementary School Journal*, 90:5, 547-570.

YOUNG-LOVERIDGE, Jennifer M. (1987). *The Development of Children's Number Concepts*. University of Canterbury: Education Dept. Research Report No. 87-1.

CHAPTER 2

AIMS, QUESTIONS AND APPROACH

The present study began in 1989.

Specific Aims of the Project

* To establish a database of observations videorecorded in a sample of junior school classrooms at three age levels. Video-recording began in 1989 and was completed in October 1991.

* To transcribe these in order to produce texts for analysis.

The speech of teachers and pupils, as this is heard on the tapes, has been transcribed for the 10 schools videorecorded in 1989.

* To use these texts to describe the organisational characteristics of New Zealand classrooms and how junior school children make use of the resources of these classrooms.

The present report presents some of the findings.

* To describe variations across classrooms and to attempt to account for these.

Similarities and differences are shown for the 5-year-old classrooms. Discussion of possible causes of variation will be deferred until the final report.

Research Questions

* What are the organisational patterns observable in new entrant classrooms?

* How do these patterns relate to curriculum areas and classroom activities?

* How do children within the classroom make use of the classroom resources (defined as teachers, other children, physical resources)?

The Theoretical Approach

As already noted (cf. Nutthall, 1990) classroom studies have generally interpreted learning as the result of a process of interaction between teachers and pupils (the process-product approach). While not wishing to ignore this important aspect we felt that what occurred in classrooms also had something to do with the characteristics of the pupils themselves, with the human and physical resources available, and with the courses of study (syllabus, curriculum). The general approach adopted is one which has come to be called Vygotskyan. According to this viewpoint children and teachers are considered to jointly negotiate 'meanings'. This use of 'negotiate' should not be confused with the process in which teachers and pupils negotiate learning goals.

Cultural knowledge is held to varying degrees by the individuals within classrooms. Its transmission from more to less knowledgeable members takes place as the more knowledgeable lead learners to understandings which a learner could not achieve without assistance. Children contribute to their own learning and to the understandings shared by some or all members of the classroom.

Children, according to Vygotsky (1978) first construct their learning on the social plane before it is internalised. For example, young children customarily reproduce the actions of others long before they understand the meaning or purpose of these actions. Reproductions by children of socially defined activities are the precursors of full understanding.

Although understanding is negotiated between teacher and learner the learning path is determined in large part by the intentions of the teacher. Teachers' intentions are expressed in the curriculum. What do teachers intend their pupils to learn?

The broad theoretical approach was described in an earlier paper (McDonald and Kidman, 1991) of which an abridged version follows.

Ten Days in a New Entrant Classroom

At 12.13 pm a writing session finishes and the teacher organises the class for independent reading activities. There are about twenty-five children in this single cell classroom.

Alan and Lisa are given a book to read together. Alan is a rather earnest little boy who has just turned five. Lisa is an older girl. She and Alan begin to 'read' the book. The book is about shapes, size and counting.

When Alan and Lisa appear in the frame of the video camera they are discussing the book. At first their speech is inaudible. At 12.17 pm the microphone picks up what they are saying. The following episode finishes at 12.21 pm.

Alan: *(pointing to a series of triangles of different sizes).* This is the bigger, the biggest in the whole world. Where's purple? Where's orange? Green! Ah-ha, this is a very funny book. *(Alan is still working within the boundaries of his existing knowledge. He knows the comparative and superlative for `big' and he is looking for colours whose names he knows. We can see that he can correctly match the colours to the names.)*

Alan: *(to Lisa)* What does that say?

Lisa: *(referring to text)* That says it's a circle *(Lisa understands the intentions of the text)* How many circles can you count?

Alan: *(points to the circles and sings)* One, two, three, four, five, six, seven, eight, nine, ten. *(Lisa turns back a page)* No, the wrong way. The wrong way.

Alan: *(points to the circles and sings)* One, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve.

Alan: One, no, one, no one two three four five, six, seven, eight, nine, ten. *(He is counting clouds in the book. He knows the sequence of numbers but does not always match a number to a cloud).*

Alan: *(Sings)* One, two, three, four, five, six, seven, eight, nine, ten. *(Alan covers the text with his hand).*

Lisa: No, I'll tell you off, OFF! Get your hand off! I'll tell you what it says.

Alan: One, two, one, two, one, two, three, four, five, six, seven.

Lisa: No.

Lisa: This says, `try and find all the squares'. That is not a square.

Alan: Oh sorry. I'm not a square am I? Awww! There aren't any squares over there.

In each classroom we selected four children for special focus. Alan was one of these children. We also recorded what the teacher was doing and what was happening in the rest of the class. Selecting four children for special focus ensured that we were able to get to know individual children and observe their behaviour in a variety of classroom contexts as well as observing how different children behaved in similar classroom contexts.

By videorecording continuously during the course of a day we have gathered illustrations of children's reactions to different kinds of structural features of the classroom such as the arrangement of children for learning in whole groups, small groups, pairs or as individuals.

There is a timeline on the videorecord and so we know when a particular bit of behaviour occurred. The episode we began with is a transcription of some of the speech we recorded, together with information about the context in which this speech occurred and the resources used by the children as they worked together.

Through the process of transcription we are building up layers of information about non-verbal behaviour such as facial expression, finger pointing, nose-picking, etc. We also write

down what appear to be the teachers' intentions for their classes. What does the teacher want the children to learn? What resources are used in learning and teaching episodes? Are these resources supplied by the school or by the children themselves? Are they physical resources or human resources such as a teacher, a teacher aide, a parent or other children?

Describing What Goes On In Classrooms

What exactly is going on in the three-minute episode we first presented? How can it best be described? Are the children fulfilling the teacher's intentions? What do the children bring to the episode? These are basic questions which teachers ask about their own work. We could say that the teacher had arranged a context in which a more knowledgeable child was helping a less knowledgeable one while the teacher worked with others in the class. We could say that Lisa was using the book to make sure that Alan learns number concepts. Both these descriptions tell us something about what is going on. But one thing they do not tell us is how Alan is learning or precisely what he is learning. The two children are using the one resource, an illustrated book, but they use it in quite different ways. Perhaps it would be better to ask how the two children defined the situation they shared and to what extent they shared a definition of their situation. The event seems to begin with Alan reproducing school-type behaviour more or less independently of Lisa. Then he realises that a more precise response is needed and he asks Lisa for help. That turns the event into an overt teaching-learning situation. The children's behaviour suggests a tacit agreement that Lisa was (in school terms) the `teacher' and Alan was the `learner'. We can also say that although Lisa was the more knowledgeable, both children knew what teaching-learning behaviour should be like. They knew its form and its function. They both knew the scripts for teaching and learning even if Alan hadn't learned the meaning of all his lines. But he knew that other people such as Lisa held knowledge that he did not have and that by questioning and observing he might take this knowledge for himself.

Even in this short episode we can see the complexity of the meanings the children are creating as they negotiate what a learning environment means to them. There is the meaning expressed in their dialogue. And there is the meaning contained in the resource - the book that they share. To make sense of all these layers of meaning the children call upon their own social and cultural knowledge and work it into the script.

Liliana Landolfi (1989) suggests that the explanations that take place between and within individuals have a direct impact on our lives and daily realities. We can think of explanation as a social activity. If two or more people are working within a given universe of knowledge then their negotiations affect and modify their states of being. They enter into a shared activity.

In the act of the dialogue meanings are transformed and participants exit with a new universe of knowledge.

This is rather like what happens when you edit something on a word processor. At the end of a session a new document has been produced in which various passages have been re-arranged or replaced.

This perspective assumes that children are active participants in the classroom environment - processing and transmitting information and meaning from their own understanding rather than passively receiving it from a teacher.

In our videorecords the children and the teachers frequently demonstrate explanatory behaviour during which they negotiate immediate meanings such as what a piece of writing says and understandings about what writing is, its value, and what it is used for.

The idea, attributed to Vygotsky, that cultural understanding is first constructed on the social plane and later internalised has clarified for us, some of the behaviour displayed by the children as they acquire the culture of the classroom. For example they commonly understand how people behave when they are learning to read (it involves turning the pages of a book and pointing at the words) before they can read with meaning.

It is possible to observe explanatory activity, as it occurs in social situations due to its overt nature. The more reflective, internalised processes which accompany children's explanations can only be assumed from the context. Children tell themselves and each other stories about the world in order to discover understandings of it. This is an explanatory process that defines some types of social activity. In their first year at school, children develop a wide range of explanatory activities.

> Explanations are not desocialised momentums; rather, they integrate the actors' shared and unshared and past experiences with the experiences they are creating. (Landolfi, 1989, p.140).

Types of Explanation

In the classrooms we observed we can identify three types of negotiated explanations which form part of teaching-learning events. These can be called the negotiation of direct meaning, the negotiation of understanding, and the negotiation of the learning environment. All three types are present to some extent in all teaching-learning events. However, some events are better examples of one type of explanation than are others. The next illustration is a teacher-led session in which all the children are sitting on the mat while the teacher reads them the story. We are presenting it to illustrate the negotiation of direct meaning.

(i) *The negotiation of direct meaning*

Teacher: *(holds the book up to the children so they can see the text)* He's probably meowing quite loudly. How would I guess that?
Gemma: Because its got, because its got... excremation...
Sally: Extremation.
Sue: Extremation marks.
Teacher: Oh, good on you. The exclamation marks. *(Teacher shows children the picture that accompanies the text)*
Teacher: Who do you think this is, Nicole? This lady here?
Nicole: Mummy.
Teacher: It's Mum! Do you think she will feed the cat? Do you think she will, Jackie?
Jackie: No.
Teacher: Let's find out. *(Teacher and children read the text in unison)*
John: Hey - there's talking marks?
Teacher: Why are there talking marks?
John: 'Cause the cat's going `meow, meow, meow'.
Teacher: No, where Mum's talking, they've got talking marks... Who's this man going to be? *(Shows the picture page to the children)*
Jan: Grand-dad.
Teacher: Grand-dad? Could be.
Simon: Grand-pop?
George: Uncle.
Teacher: What makes you think it's uncle, George?
George: Because I've heard the story before.

You can see what the teacher intends to teach - comprehension of the story, and punctuation as it occurs in the text. The children are being asked to link the pictures to the text, and use the pictures and the text to anticipate the rest of the story. The written word becomes the focus of a shared group activity, transforming the text into a classroom dialogue by means of a process of a structured negotiation between the teacher and the children. This is a subtle but effective way of getting beginning readers used to the idea of reading for meaning and helping them to identify the visual and textual cues which will assist them to do this. In this sense, the children are coming to understand a range of complex ways of thinking intelligently. The common assumption that all children are working with the same problem-solving strategies is exposed by George who has read the story before, and in stating this, brings a new element into the negotiation of direct meaning. George has done the unexpected, he has short cut his way through the strategies under negotiation and introduced one of his own, using the same instructional frameworks previously made available to him by the teacher herself.

Yet the unexpected plays a crucial role in the development of classroom negotiations. As children become increasingly adept at classroom discourse they frequently supply their own unique contributions to classroom learning. This does not necessarily undermine the authority of the teacher; in several classrooms we

have observed teachers connecting the children's apparently tangential ideas to the framework of the lesson - hooking these ideas into the dialogue as it were.

The unexpected remark is typical of classrooms containing five-year-olds. Such a remark is a challenge to a teacher of young children. In the next extract we will show how one teacher dealt with them.

The following discussion took place during a science lesson:

Teacher:	If we didn't have any water, what would happen to us?
Children:	We would die.
Toby:	We'd thirst to death.
Teacher:	We'd thirst to death. Why do we need water?
Emma:	We can buy water.
Teacher:	We can buy water?
Emma:	Yeah, from New World.
Melanie:	No, you can't buy water.
Teacher:	You can't buy water?
Melanie:	You'd have to get one of those ice blocks... you have to get an ice block 'cos ice blocks have got juice in them.
Teacher:	Ice blocks have got water in with the juice. You're right there.

(ii) ***The negotiation of understanding***

Children use a wide range of interactive behaviours to construct meaning. Some of these involve what can be called general or background understanding either about things in the classroom or the world in general. In a classroom the conversations that take place between children and with the teacher come to inform children of the kind of discourse that is required of them at school. This kind of understanding is sometimes called meta-cognition.

We have noticed the fluid and dynamic nature of children's conversations with each other as they express implicit understandings about the world around them. In the following extract three participants are writing their own stories. There are five children in the group and two of the girls are holding a discussion about gender with one of the boys. The teacher is working with a small group in another part of the classroom.

Mary:	*(to Matthew)*... and, and, and you gotta share. You gotta share. Yes, you gotta share those pencils, eh! *(Matthew does not respond)*
Emma:	Well, then you just can't play.
Matthew:	I'm not playing! Hey, do you like Batman?
Emma:	Only boys watch that.
Matthew:	No, boys AND girls can watch it. Anyway, I like Batman, eh!
Mary:	Well then, you'll never marry.
Emma:	Anyway, you're not maryying Claire.
Matthew:	Claire, who's Claire?
Mary:	*(to Emma)*: Isn't she the girl who comes?
Matthew:	Who's Claire?
Emma:	You know her. Do you want to marry, Matthew? Do you

want to marry the princess? The princess of the world?

Matthew: No. Do you know what I'm going to do when I'm an adult? I'll always remember this. I'm going to buy my own sword and shield and I'm going to fight all the enemies, so the army don't have to worry about it.

Emma: When I'm an adult I'm going to have a shop and I'm going to buy...

Mary: Well I knew someone who did that and they got arrested.

Matthew: What! Did you know the police ask you if you're going to kill anymore and if you say you're not, they let you go free.

Teacher: Finished, Matthew, have you?

Matthew: No.

Teacher: Well hurry up, your tongue is going very fast.

Jenny: I've got a funny face.

Michael: I've got a funny face too.

Emma: I like doing `e's in my book.

Matthew: I only like doing the letter `2'.

Emma: Do you?

Matthew: No, I only like doing the letter `2' all the time.

Conversations of this nature form a significant part of the school day. The extempore, confusing, apparently irrelevant and sometimes misinformed statements in these discourses express something of the implicit themes of the lives of five-year-olds who are caught in the act, as it were, of constructing a critical and reflective view of the world they inhabit. In this conversation the children have taken meaning from their understanding of marriage, sharing, justice, morality, gender, but they have altered and replaced parts of those meanings in the course of their dialogue. The official context of the lesson, story writing, allows them to develop themes which provide them with material for their own exploration of their culture including the culture of their classrooms.

(iii) *The negotiation of the learning environment*

Remember Lisa who was `teaching' Alan. Her behaviour is clearly teacher-like and yet it is not a simple reproduction of how her teacher behaves. None of the teachers we observed said anything like, `No, I'll tell you OFF! Get your hand off!' In fact all the teachers were models of calm and restraint. Alan also tries to conduct the episode his own way. He finally accepts that he has `made a mistake', a powerful understanding, and then tries to ensure that he remains in favour with Lisa by saying, `Oh, sorry. I'm not a square am I?'

Conclusion

By accepting that learning is a matter of negotiation of direct meaning, of understanding, and of the learning environment we can understand why the climate of one classroom may be different from

another and why classrooms containing older children differ in certain respects from the classrooms we observed.

REFERENCES

LANDOLFI, Liliana (1989). Explanation as Joint Activity, *The Quarterly Newsletter of the Laboratory of Comparative Human Cognition*, 11:4, 136-141.

McDONALD, Geraldine and KIDMAN, Joanna (1991). Ten Days in New Entrant Classrooms, *set* no. 2.

NUTHALL, Graham (1990). The Future of Research on Classroom Learning and Teaching. *Input*, 12:1, 1-3.

VYGOTSKY, Lev S. (1978). *Mind in Society*. (M.Cole, V. John-Steiner, S. Scribner and E. Sourberman, eds) Cambridge, MA: Harvard University Press.

CHAPTER 3

METHODS AND SAMPLES

Videorecords and child interviews were carried out with concern for the rights of the children. Care was taken at all times that there would be no adverse effects on the children as a result of the study.

Teachers were told that the videorecord of their classroom would not be shown without their permission to anyone else apart from those who would study and analyse it. The teachers who were recorded were free to show the videotape to whoever they wanted to.

School Sample

In order to establish a core sample of schools which would vary in size and in proportion of Maori children on the roll help was sought from Nicholas Pole, the Senior Statistician of the former Department (now Ministry) of Education. He provided four lists of schools within reach of Wellington. The schools were classified on the basis of roll size and percentage of Maori enrolment in 1988. The categories were:

1. Rolls less than 150 pupils and low Maori rolls (% less than 30).
2. Rolls of 150 or higher and low Maori rolls(% less than 30).
3. Rolls less than 150 pupils and high Maori rolls (30% or more).
4. Rolls of 150 or higher and high Maori rolls (30% or more).

One school was selected from each of these categories. A further 6 schools were selected from the most common category; rolls of 150 or higher and percentage of Maori pupils less than 30 percent. The core sample ensured the inclusion of Maori children and also provided a measure of the school's socioeconomic status. At the time the sample was selected the Ministry did not keep records of the socio-economic status of schools. More recently a method has been trialled in which the residential addresses of a sample of students were obtained from secondary schools. These were located in a Census mesh block and the SES information available for the meshblock was used to classify the school

(Dialogue Consultants, 1991). This study was carried out under contract to the Ministry of Education. One of the findings was that the ethnic variables (Maori, Pacific Islander) showed a strong relationship with examination performances and with SES disadvantage.

The school sample consists of 7 state schools, 2 integrated schools and 1 private school. Most schools in New Zealand are part of the state system, but there are also registered private primary and secondary schools run by religious or philosophical organisations or by private individuals. According to the Education Statistics of New Zealand 1990 (Ministry of Education), at 1 July 1990, 3.8 percent of all primary and secondary school students in New Zealand were attending private schools.

Each integrated school has completed an integration agreement where the proprietor undertakes to provide accommodation and equipment while the Crown pays the day-to-day expenses incurred. Each school follows the state curriculum requirements but incorporates its special character observances into the school programme.

By July 1990, there were 195 primary schools, 10 form 1-7 schools, 18 form 3-7 with attached intermediates and 29 form 3-7 schools classified as state integrated schools.

There is no rural school in the sample. Table 1 gives the percentage Maori enrolment and roll size for all the schools which were videorecorded in 1989.

Table 1
Percentage of Maori Children on Roll and Size of Roll in 1988

SCHOOL	MAORI %	ROLL	TYPE
01	3	640	State
02	8	349	Integrated
03	22	130	State
04	8	414	State
05	2	485	Independent
06	10	167	Integrated
07	9	222	State
08	17	156	State
09	33	424	State
10	36	90	State

It can be seen that the smallest school contained 90 pupils and the largest 640. The lowest percentage of Maori pupils was 2 and the highest 36.

Class Sample

Classes containing new entrants were identified in each of the 10 sample schools. Children in New Zealand enter throughout the year as they turn five. So that classrooms would be comparable in terms of number of children and stage of school year data collection was carried out in term 3 1989. The children in each class constitute the class sample for the videorecording.

Classrooms

Four of the classrooms were open plan. The remainder were single cell, or single space but generally using other rooms or spaces for particular activities (variable space). The number of children in the classroom or space was recorded at the time of videorecording. The smallest class/home group was of 10 new entrants and the largest class/home group was 31. In some classes the children were with one teacher all day but in others some or all of the children went to another teacher for particular purposes. In others a group of teachers worked together as a team with a large group of children.

Approach to Schools and Parents

Information about the study was sent to the schools in the sample and to the parents of the children in the selected class.

Children

A small number of children were selected for special focus. However, a letter went to all caregivers of children in the class asking their permission for the inclusion of their child in the study. The letter was written in English, Samoan and Tongan, the translations being made by parents of children at one of the schools (Appendix 1).

The device of choosing children for special focus was adopted on the recommendation of Lily Wong Fillmore who had used this method in videorecording classrooms in California. Four children were selected from each classroom. This ensured that the 5-year-olds in composite NE/J1-J2 classes were singled out for special observation. Selection was on the basis of gender and birthdate. The 1989 sample consisted of 35 children, the shortfall being a consequence of the absence of a particular child on the day of recording or failure of the child's parent to return a permission slip.

We wanted some sample children who were born in the first half of the year and some who were born in the second half.

Where schools had a separate new entrant class this was not always possible because children were kept in `new entrants' for only a short period. The ages of the children were recorded as on the day of videorecording. The ages expressed as decimals ranged from 5.00 to 6.17. The average was 5.36 (just over 5 years and 4 months); the median was 5.25 (5 years and 3 months). Whether children were classified as new entrants or J1 depended on the number of children in the Junior School and the ages of the children. A common pattern is to keep a New Entrant group for about a term. One teacher reported that, `After 2-3 months they're ready to zoom and then they go into the reading scheme'.

In 1990 we revisited two schools to record an afternoon session. In one there had been a malfunction in the microphone during the original recording and in the other school the recording session had been abandoned after the morning session because there had been a change of teacher and the relieving teacher was not expecting to be videorecorded. In the school where the sound had not at first been recorded the second class was taught by the original teacher. In the second school the teachers had changed. When we re-recorded we chose children whose ages and gender matched that of the target children recorded in the 1989 morning session. With these additional children the total reached 41. Twenty two of these were girls and 19 were boys.

Data Collection and Analysis

Videorecording procedures

Observations were made by videorecording continuously over the course of a school day. The camera operators were Cathy Wylie (3 schools), Joanna Kidman (7 schools) and Victoria Clarke (1 school for half a day).

i) On the day prior to videorecording the camera operator visited the classroom with the video equipment to familiarise the children with the camera. The classroom teacher introduced her to the children and the camera operator explained to the class group that she would be recording the children at work. The camera was passed around the children and they were encouraged to look through the lens and push the camera buttons. The camera operator explained to the children how the camera worked and answered any questions they had. The children were advised that it would be difficult for the camera operator to talk to them while she was operating the camera the following day. The classroom teacher then reinforced this point and reminded the children that they should try to ignore the camera the following day and prove what good workers they could be.

ii) On the day of videorecording, the camera operator set up the video equipment in the classroom before school began. Where possible, the camera was positioned to the side of the group, at the front of the classroom in order to view the children's faces without being directly in front of the group.

iii) Before school began, the camera panned the classroom to record the physical resources.

iv) Children were recorded as they entered the classroom. The teacher introduced the camera operator, who was then greeted by the children. The children concerned were not told that they would be the subject of special focus.

v) There was only one camera in the classroom. Initially it was intended that each of the target children would be the subject of focus for half an hour at a time, regardless of what else was happening in the classroom. This proved unworkable for the following reasons; children move around the classroom, at times making it impossible to track them without being intrusive; intensive focus on one child meant that it was not possible to record events taking place in other areas of the classroom, some of which influenced the behaviour of the target child. In addition there were varying numbers of target children in different classrooms. After some trials, it was decided to focus on each of the target children during a block of classroom time (such as the duration of a reading session or other identifiable learning event) and to include sufficient of the classroom context to make sense of what the children were doing.

vi) In general, neither the focus children nor the others in the class displayed awareness of the camera or the camera operator on the day of videorecording. The camera operator did not initiate interactions with the children although she responded if a child directed a question to her.

The videorecords contain instances of children who were aware of the camera and who 'performed' for it (e.g., staring directly into the lens, pulling faces), however, these tend to be isolated incidents. Some of the teachers appeared to give the target children some extra attention but this proved to useful in later identifying and analysing the behaviour of these children.

Description of the technical equipment is given in Appendix 2.

Transcriptions of Videorecords

The aim of the transcription was to produce a description in hard copy of what could be heard and seen on the monitor screen. The

videorecord contained a great deal of information not all of which could be picked up on a single viewing. The value of the videorecord was that it could be viewed several times and the action frozen or moved forward slowly in order to see the fine detail.

The transcribers examined segments of a tape many times in order to hear and see clearly what was happening.

Each viewing of the videorecording for the purpose of the written transcription constituted a `sweep'. There was no limit on the number of sweeps. The observations were all matched to the recorded time line. The transcription of the speech provided an index to the videorecords.

Transcription of speech and the description of events observed preceded any interpretation. The data can be analysed in a variety of ways. The transcription manuscript allowed the researchers to generate interpretation, check interpretation and illustrate interpretation but full understanding also involved viewing the episode on videotape.

The information from a single sweep is equivalent to a `column'. It is one set of several sets of events occurring simultaneously in real time.

For the Junior School videorecord transcriptions, the basic columns were compatible with the theoretical approach described earlier in this report and provided the range of data needed to answer the research questions.

1	2	3	4	5	6
Time	Teacher	Child	Context	Resources	Intentions

The following were the instructions for completing the columns.

Column 1 : Time. Time was recorded in intervals of 1 minute. If smaller time intervals are required the videorecord can be moved frame by frame to establish the sequences of events. The videoplayer also displays elapsed time and this can, if necessary, be used to help establish the order of events.

Columns 2 and 3 : Teacher Speech and Child Speech. Teacher speech and child speech are to be kept separate by arranging them on the page in separate columns and in time sequence. It is often difficult to hear exactly what a teacher - or more likely - a child has said. The tape should be played over more than once to identify the words. If the speech cannot be deciphered it is recorded as `inaudible'. Uncertainty over a word can be indicated by ?.

Column 4 : Context. Classroom events are to be described in order of time. If these events are recorded along with the speech then it will always seem as though events start with, and are controlled by, speech and it is difficult to tell whether the speech initiates an event of whether particular events initiate the speech. The camera will not always show the whole class. The context record should include:

(a) Visitors to classroom. Size and arrangement of teaching groups.

(b) The behaviour of any child who is in the frame.

Column 5 : Resources. Against the time-line and for any particular event the physical and human resources should be listed. For example, in a writing event, the resources may be other children in a small group, pencil and writing book, table and chairs, words on the blackboard. A spelling event may involve the teacher, the blackboard and chalk, and the mat on which children are seated. The resources being used by a target child should be recorded.

Column 6 : Intentions. This is a column used to assess what appear to be the intentions of the participants in a videorecorded event. In particular, what does the teacher intend to teach? This column indicates broadly the curriculum that is followed during the course of a day. Interpretation should not go beyond what can be seen on the monitor screen unless other sources of information are available (e.g., camera operator, teacher or other observer can explain events which are not clear from the videorecord).

Teacher and Child Interviews

Junior school teachers, assistant principals and the target children selected for the videorecording were all interviewed. The interviews were audio-taperecorded and later transcribed. The interviews collected information of interest to both the 'mapping' and the 'tracking' studies. For the present study only the first interviews with children and teachers have been used.

6- and 7-Year-Old Samples

In 1990 and 1991 6- and 7-year-old children respectively were recorded in four of the original schools. We included a school from each of the sample categories 2, 3 and 4 but replaced a school in category 1 in the 5-year-old sample by a second school in category 2 because we wanted to retain one integrated school in the sample. Moreover, the percentage of Maori pupils in that

school while not reaching the level of 30 percent was, at 22 percent, high in relation to the percentages for the schools as a whole. The analysis of these later videorecords will appear in a subsequent report.

Summary

The videorecords constitute texts which can be interrogated. Some of the questions that can be asked are: How does an individual child come to know what it is that he or she should learn? How can the knowledge that children acquire within the home and classroom be accommodated in a description of learning? The concept of the negotiation of learning acknowledges that children may construct their own knowledge from what others offer them and that the process may change as children's store of school knowledge increases. Such an approach allows for different paths to learning depending upon what children have learnt already. The teacher and classmates are part of this negotiation of understanding and have their own trajectories of learning. What happens in new entrant classrooms may not be the consequence of single factors such as praise from the teacher or time on task or the quality of the teacher's verbal interactions with the children but a configuration which includes these and other factors.

REFERENCES

DIALOGUE CONSULTANTS LTD. (1991). *Development of Socio-Economic Indicators of Educational Disadvantage in Schools*. Report prepared for the Ministry of Education.

CHAPTER 4

THE SCHOOLS

In 1989 a description of the proposed study was given to the sample schools. In 1990, a report on progress and early findings was sent to the schools. This contained descriptions of the sample schools. Schools were asked to correct anything they felt was inaccurate and to make any alterations to the description of their own school that they wished. Two schools made alterations and the following descriptions incorporate these. The descriptions are based on material from the interviews with teachers.

School A: This is a small school with a high Maori roll. The catchment area is small and local. A few children come from wealthy or professional backgrounds but many do not.

The school has developed a strong and comprehensive philosophy on learning, over a period of several years. The teachers work hard to create a child-centred environment where children are encouraged to assume a high degree of self-responsibility. The teachers aim to guide children into successful learning situations rather than to over-direct them.

The junior classrooms in the junior school are single cell and a full Reading Recovery programme is in operation.

School B: This is a large school. The social backgrounds of the children are divided, more or less, into two distinct groups. There are a lot of families whose income is derived from shift work, manual labour or benefits such as the Domestic Purposes Benefit or unemployment benefit. But there is an increasing number of more affluent pakeha families who have bought up much of the area's cheap housing. There has been a growing conflict between the most recent arrivals in the area and the more long-standing residents who do not have the same financial means. The latter have begun to resent the intrusion of the newcomers into their community. The school's largest ethnic

groups are Maori, Samoan and Pakeha, although there are growing numbers of Tongan, Kampuchean, Vietnamese, Chinese and Indian children.

There is a Maori Language Unit on site which is largely autonomous. The playground is a good size and the attractive school library reflects the diverse ethnicity of the school population. The junior school classrooms are single cell although some of the larger rooms are used for more variable activities.

The staff have a strong commitment to promoting anti-racist attitudes among the children. They aim to encourage children to achieve their own potential. As the Assistant Principal told us, their `best is *our* best'. The staff also encourage a family atmosphere at the school. This is not a Pakeha nuclear family model, but one that extends across a wide range of interpretations of `family'.

School C: This school is an inner city, full primary school with a large transient population. The geographical catchment area extends across the greater Wellington area and to areas such as Porirua. The immediate catchment area has a divergent ethnic and socio-economic population with a small group of affluent families and a large number of indigent refugee families from South East Asia, single parent families and university students living in shared accommodation. Fifty-one percent of families at the school come under categories 5 and 6 of the Elley-Irving Index or are classified either as students or beneficiaries.

The families represented at the school include Pacific Island (predominantly Samoan), Maori, Indian, Pakeha and South-East Asian. Thirty percent of enrolled pupils speak English as a second language.

The school has a Deaf Unit, a pre-school class for hearing impaired children, a Special Class and an Assessment Class.

The physical space at the school is considered by junior school teachers to be adequate and although there is no grass area on the school grounds, there is a large grass field next to the school which is often used.

The new entrant classroom is open plan and contains children up to Standard One level. Two teachers are teamed to work in this classroom.

The school has a very strong commitment and

policy for functional mainstreaming for the school's special educational needs children. There is strong evidence of this in the new entrant classroom where the teachers all have appropriate training and one teacher is a fluent speaker of sign language.

School D: This school is situated in a seaside suburb in an established residential area. The immediate catchment area is an affluent professional neighbourhood with a largely Pakeha population. The families represented at the school include (predominantly) Pakeha, and smaller numbers of French, German, Cambodian, Chinese, Indian and Samoan. Nine percent of the roll is identified as Maori. The school roll is stable. The physical space at the school is considered to be good by the Junior School teachers. The play areas are attractively designed and the library is well stocked.

The Junior School is open plan although there are closed off home areas attached to the central room. There are five staff in the junior school. Each of these teachers fulfils a function for the 1:20 staff allocation and they are assisted in a variety of activities by a comprehensive timetabled system of parent helps.

Promotion of junior pupils is decided on their progress and social development but this can be accelerated if numbers increase rapidly. ESL children and/or slow developers can be retained in the new entrant group a little longer if this is in their interest.

The school has always ensured that the basic curriculum is competently presented to all children. A careful monitoring of pupil progress throughout the school in basic subjects is maintained. The teachers believe that children should also develop to their best cultural and social potential.

School E: This is an integrated Catholic school. The children come from a wide range of backgrounds and the junior classes include Filipino, Maori, Samoan, Dutch, Yugoslav, Greek and Italian children.

The new entrant Classroom is a well-resourced and attractive single cell area.

There is a well-equipped library and a strong commitment from the staff to keep it well-stocked and up-to-date. There is a Reading

Recovery programme in operation. The 1:20 staffing allocation is used for Reading Recovery and one-to-one literacy-oriented learning.

The school's philosophy incorporates elements of religious observance; the Holy Communion is an important aspect of school life. Religious instruction is given and children are encouraged to question and debate as part of their learning.

School F: This is a private full primary school with an attached pre-school. The school is Anglican. The school is in a city location but draws its pupils from a broad catchment area. The parents come from a wide range of social backgrounds. The classes include Greek, Samoan, Indian and Chinese children.

The school is well equipped. There are specialist teachers for music and for PE, and for French in higher classes.

The school day starts with assembly including religious observance. A few four-year-olds may be enrolled in the new entrants class.

Phonics are included in the reading programme, with regular homework, and there is some use of computers for maths and publishing. Independent learning, and sharing with others are important elements of the junior school programme. The school has an English prep school atmosphere and the programme is more formal than in state schools.

School G: This school is situated in a relatively affluent and growing area, with little unemployment. Most of the children are Pakeha.

This school is full primary. In 1989 the total roll was 414, and still growing. The school is well resourced.

In June 1990 there were 225 children (approximately) in the Junior School which is organised into two syndicates.

(a) Standard 1, 2 & 3 (3 classes)
(b) J1 & 2 (4 classes)

There is a senior teacher in charge of each syndicate and the Assistant Principal has overview of both. Children are in single cell classrooms and there is cross grouping for reading and maths. The school has part 1:20 allocation i.e., one teacher. This is used for

Reading Recovery and a comprehensive language programme in the J1 & 2 syndicate.

Programmes of work reflect a balanced approach across the curriculum with a firmer commitment to reading, writing and maths. There is an emphasis on developing independent learning and promoting self-esteem. A daily circle time encourages the children to talk about themselves, their feelings and their behaviour towards others.

School H: In this school most of the children come from a low socio-economic background and the junior classes include Samoan, Maori, Indian, Malaysian, Greek and Pakeha children. The school has a stable roll. The catchment area is not entirely local. Some children come from suburbs close by.

The junior school is a combination of open plan and single cell classrooms used as a `variable' teaching space. This is largely due to the unusual design of the building. There are a number of nooks and crannies, staircases and oddly placed rooms that can make teaching difficult. The school is sound proofed because of its proximity to a high noise level industrial area. This has caused some ventilation problems and, at times, the classrooms feel overheated. The playground is very large, open and grassed. The library is attractive and well stocked.

The staff have spent a great deal of time discussing and developing a teaching philosophy and some strong commitments have subsequently emerged. The teachers believe that children have the right to develop at their own rate; that the individual needs of every child will be met (despite the lack of physical resources at school), that children must learn to take responsibility for their own actions, and that it is the children, rather than the teachers, who have the right to regulate their own behaviour. The teachers however, do not take an `anything goes' - back-seat approach to the latter. During developmental time they negotiate learning and behavioural contracts with individual children, encouraging them to learn to work as independent learners and emphasizing the value of self-evaluation.

School I: This is an integrated Catholic school situated in a Wellington suburb.

The junior school includes Samoan, Maori,

Greek, Chinese, Polish and Pakeha children. They come from a wide range of backgrounds, from 'professional' families to 'unskilled labourers'. The junior school is comprised of single cell classrooms but for three mornings a week, the dividing doors between classrooms are removed and the learning groups are mixed.

The outside physical space of the school is adequate for the children's needs, although the playgrounds are separated by a road.

The school has a strong religious outlook and the staff aim to help the parents participate in the learning process of the children, the new entrant teacher would like to see both parents and children develop together intellectually, morally and spiritually. There is an emphasis on the development of the whole child.

In her teaching programme, the new entrant teacher aims to develop strategies for independent learning parallel with emotional and behavioural maturity. Children learn to cope with their feelings, such as anger and they are encouraged to find peaceful solutions. Sometimes drama is used to achieve this, sometimes it is a matter of talking things through.

School J: This is the largest school in our sample. It is a full primary school in the state system. Much of the junior school is open plan but organised on the principle of home spaces. Teachers work in teams, and children are grouped for reading, writing and maths by their achievement levels. In June 1990 there were 190 children in the junior school and another 50 were expected to enter during the remainder of the year.

The community was described by the teachers we interviewed as a professional area in which a lot of mothers work.

There are very few Maori children on the roll but quite a few Asian children have recently come into the school.

The teachers aim to given children feelings of self worth and security in their learning environment and encourage them to take responsibility for their own behaviour.

It can be seen in these reports that many of the points made by the 'expert witnesses' and the former Advisers to Junior Classes were repeated by the teachers whose descriptions provided the basis for the accounts of the schools. Self-reliance and independence in learning, guidance rather than direction and a

belief that children have different rates of development which teachers must observe were common to all groups.

CHAPTER 5

THE CLASSROOMS

In 1967, *Children and their Primary Schools* (otherwise known as the Plowden Report) was published in the United Kingdom Department of Education and Science. This report had a profound effect on practice in primary schools in the U.K., especially in the infant classes, and was well received in New Zealand. Indeed the Ministerial Curriculum Reviews (1985) in New Zealand incorporated the same approach to education as that of the Plowden Report. More recently, at least in the United Kingdom, the ideas in this report have begun to be challenged. Therefore, it is important to understand what occurs in classrooms in New Zealand and to examine some of the current issues in the light of evidence.

In a comment in the *Times Educational Supplement* (TES, 1991) post-Plowden or `progressive' classrooms were described in terms of a seamless curriculum, the use of grouping as an organisational device, enquiry methods, a caring environment and good display. Such classrooms were referred to as demanding settings for teaching.

Nine of our schools were at the `progressive' end of a scale from traditional to progressive and one was `traditional'. In the `traditional' classroom the children had their own desks which they used for seat work. But they also used an open space in the classroom where they could sit on the floor for story time and other group activities. In the `progressive classrooms' class teaching sessions were conducted while the children were seated on the floor facing the teacher. Tables seating about six to eight children were used for various kinds of group work such as story writing and maths and these tables were used also for setting out some of the activities for `choosing time' (developmental). In the private and the integrated schools the children wore uniforms. In the state schools they did not.

There was no one architecturally-typical `schoolroom'. The closest one can get to a general description is that all classes had a home classroom or space and all classes or groups from these classes, spent part of the school day in other rooms or spaces. In one large school the open plan space allowed the children to be organised in a variety of ways throughout the day. In another school the new entrants occupied their own space for most of the day while older children were working in adjoining spaces. Some of the schools used assembly spaces for the whole

primary school while others used assembly spaces for the whole junior school.

When she had seen the videorecord of her class one of the teachers said that she was amazed at how often the class was interrupted. It is true that all classrooms were 'interrupted' by people coming in to ask for lunch orders or to distribute class photographs or to be given a notice about a school activity. At the end of the day mothers, fathers and older brothers and sisters came in to take children home. This is just as typical of the junior school classroom as learning to read.

'Management' was an important aspect of all classrooms. As one teacher expressed it:

> It is important to be well organised... have a file on the desk so you know exactly who's done what. Otherwise children can slip through the net very easily.

The day was arranged so that the children were kept busy. In one school children arriving at school before class had started made use of developmental materials which had been set out. It was common for a class to be taught by more than one teacher. In one school children began with one teacher and later in the day divided up into groups to go to teachers in other spaces. Music was frequently an occasion when the junior school came together as a whole and the session was taken by three or more teachers. In one of the integrated schools religious observance involved the whole junior school. In another school a teacher aide assisted children with writing and reading in addition to keeping the classroom tidy and seeing that teaching resources were ready and available. We encountered several classes in which two teachers shared the work. Typically one would introduce a topic while the other made sure that the children understood the task and then roles would be reversed. It was also common in these situations for the teachers to comment to each other in the hearing of the children on the behaviour or work of the class.

The staffing arrangements observed were:

One teacher and one class;
Two teachers and one class (generally a combined NE/J1 and J2);
A team of teachers or syndicate for more than one class;
One teacher and a teacher aide;
Specialist teachers for activities such as Maori or music;
A teacher or teachers and a teacher trainee.

One classroom contained several mainstreamed children of varying disability and several more children for whom English was not the first language. In two other classrooms there was a child who was having more difficulty than the rest in coming to grips with reading and writing. Teachers usually attached such children to themselves and often assigned another child to help as well.

The behaviour of the teachers was not so much 'motherly' as concerned for the wellbeing of the children, ready to resolve disputes between children, and above all very matter-of-fact and direct in dealing with the children. Children received praise from the teacher for work well done and for correct answers to questions but there also appeared to be an assumption on the part of the teachers that children were expected to reach certain standards as a matter of course. Nor did the teachers in the sample hesitate to tell the children when their behaviour was not acceptable. The environments were 'caring' and in the two integrated schools a considerable degree of attention was given to helping the children to become caring through prayers for other people, through the encouragement of cheerful countenances and so on.

In several classes there were children - Indian, Chinese, Cambodian, and Malaysian who were the only representatives of their ethnic group in the class. Remembering the comment of the 'expert witness' who had said that it was hard to be the only Maori child in the class, we looked for classes which might have only one representative of a particular ethnic group and a class or classes in which there was a group of such children. We found that two of the classes we studied each contained one Samoan girl and that a third contained a group of Samoan girls. A special study was made of the behaviour of the Samoan girls in the three classes.

Since our observations were of one day's duration we cannot comment on the teaching arrangements on all the days of the week. We recorded on a day selected by the teacher. Teachers avoided days when the normal programme would be disrupted - for example, when the school had a sports day. These points should be kept in mind as the findings are presented.

REFERENCES

ANON (1991). Comment : The Pitfalls of the Primary Needs Model. *Times Educational Supplement*, August 2, 11.

MINISTERIAL CURRICULUM REVIEWS. (1985). Wellington: Department of Education.

CHAPTER 6

THE SEAMLESS CURRICULUM

The curriculum can be subdivided into t he intended curriculum. (broadly speaking what the teacher intended) and recorded in this study as `teacher intentions', the implemented curriculum or what the teachers and children actually did and the attained curriculum or the achievements and attitudes of the pupils. The curriculum also defines what children are to think about.

All the classes worked to timetables arranged generally in half hour blocks. These blocks were called by the teachers variously language, phonics, music, science and so on. They corresponded to the intended curriculum. But a learning session in a new entrant room can seldom be described by a single curriculum term. The implemented curriculum in junior school classrooms is more like parcels of understandings.

* Children are learning to read and so their texts will be about something. The content of the text defines what children are to think about. The content of the text may include mathematical understanding, science facts, human relationships or indeed all three together. The teacher defines how they are to think about the text. This aspect of learning will be the subject of Chapter 8.

* Teachers commonly work with themes or concepts and these are expressed or exemplified in a variety of activities which may involve mathematical understanding, aesthetic experience, physical exercise.

For example, in one classroom where there were 31 children, the afternoon began with the class having a music session during which one teacher (of two present) first demonstrated high and low sounds on a keyboard and later asked the children to produce high and low sounds with their voices. The children in the class then stretched their arms up `high' and down `low' demonstrating that these concepts can be expressed in space as well as through sound. A group of children and one teacher later went outside and visited various locations in the playground such as a large

pipe, a climbing frame, a tree, a sandpit, a play shelter and a slide. In each location children were asked to produce high and low sounds and to listen carefully to changes in the quality of these sounds according to the location. One of the activities set out for choosing time consisted of a beaker of water, a row of glass containers and a tuning fork. Children could work out the relationship between the level of the water and the sounds produced.

* There is a great deal of incidental teaching which occurs whatever the intended area of the curriculum. The music lesson provided an opportunity for the teacher to ask a child to sing solo. The teacher defined the word `solo' for the class as `singing alone' and then pointed out that the child was singing solo.

* Children also play their role in setting the agenda for learning not, at this age level, by asking questions of the teacher but more usually by providing answers to the teacher's questions, the answers may display gaps in the child's knowledge. This is an aspect of the attained curriculum.

The curriculum was indeed `seamless' as teachers connected one activity to another, moving, for example, from an activity in which the class shared the making up of a story, to the class helping the teacher to write the story on a sheet of paper, to children writing the story individually in their own books. In the school which used a phonics programme, letters of the alphabet provided the anchor for a unified programme of reading, writing and drawing. In the integrated schools, concepts such as sharing and helping others played a role in determining what was taught and how it was taught.

Maths pops up in many subjects. There were examples of mathematical ideas being presented in other curriculum areas. The next example comes from a physical education lesson.

10.21 Pairs of children share a ball. Each child takes a turn to bounce the ball five times. The children are helped by the teacher to count to five as they bounce the ball.

Number (mainly counting) is included in songs and rhymes and in story texts. Teachers use counting as a timing device. `I'm going to count to five and by that time everybody has to be sitting down'. Mathematical language regarding size and shape was incorporated in reading books. Words such as `tall' and `small' were part of general classroom discourse.

The curriculum we observed was seamless partly because reading and writing are skills and so have to be applied to particular content and partly because five-year-olds need to be taught skills like counting which are required in other areas such as physical education and music.

But being seamless does not mean that one cannot calculate how much time is spent on the implemented curriculum. It does mean however, that decisions must be made about how to classify different activities. Such decisions are noted in connection with the following tables and graphs.

Table 2 shows for one school, chosen because it was typical of the others, the amount of time spent on each activity. The subsequent tables are based on similar information for all schools.

Calculation of the proportion of time spent on reading and writing was made on a conservative basis. The definition used was literacy in relation to a text.

In the interests of confidentiality the numbering of schools in the following graphs and tables does not follow the same order as the earlier descriptions of the schools.

TABLE 2

TIME SPENT ON CURRICULUM AREAS IN ONE SCHOOL

PRINCIPAL ACTIVITY	MINUTES
Greetings	13
News	16
Reading (various alphabetical activities, class)	8
Reading (T with one child)	4
Tidy up	1
Reading (`Goodnight, Goodnight', T to class)	4
Reading (`Jack and Jake', T to class)	3
Organising children to sit on the mat	2
Singing (Music session)	25
Music (listening and moving to tape)	5
Singing (`I went to visit a farm oneday')	6
Organising for playtime	2
Organising writing	2
Hand Writing	30
Choosing activities	20
Tidy up	3
Organising for lunch	2
Maths (clapping numbers)	3
Organising group activities	2
Maths (BSM activities)	30
Maths (T with small group)	4
Tidy up	2
Organising sitting on the mat	2
Oral Language Experience (discuss & draw a farm, whole class)	9
Art Activities (related to a farm)	43
Tidy up	5
Organising to go home	3

Where children were doing a variety of things within a classroom the activity of the child in camera focus was recorded. The definitions of the subject area were in some instances a matter for arbitrary decisions. For example, was the activity `choosing time' or `science'? In such circumstances we took the teacher's intentions for the class and called it developmental or choosing time.

Table 3 provides the distribution of time in minutes across the curriculum for all curriculum areas. In Table 4 the distribution is expressed as a percentage of the length of the school day as videorecorded. Figure 1 shows the average proportion of time spent on each curriculum area across the 10 schools.

The direct relationship of children with texts accounted for 43 percent of the school day and an additional 7 percent was spent in experiences and discussion in connection with texts.

Using a conservative measure of mathematics as a block of time devoted to this curriculum area an average of 13 percent of the day was spent in this way.

No specific blocks of time were given the label of social studies and therefore this area of the curriculum does not show up in the analysis. Nevertheless social studies knowledge appeared across the curriculum during the course of the school day.

TABLE 3

TIME SPENT ON CURRICULUM AREAS (MINUTES)

	SCHOOLS									
	01	02	03	04	05	06	07	08	09	10
Literacy (Based on texts)	118	150	87	130	151	105	93	49	106	111
Oral Language Experience	32	-	-	5	16	7	-	52	41	33
Maths	35	45	32	50	23	33	42	37	24	15
Music	20	10	12	3	19	2	18	36	20	3
Science	-	-	20	-	40	32	-	-	-	-
Physical Education	-	18	22	23	-	15	-	-	-	4
Maori	-	-	-	-	-	-	-	-	-	27
Greetings, News and Prayers	10	19	10	3	12	28	18	29	18	18
Choosing time	7	-	32	25	-	-	18	20	14	14
Organisation	41	19	52	26	18	37	33	26	29	22
TOTAL	263	261	267	265	279	259	222	249	252	247

TABLE 4

PERCENTAGE OF TIME SPENT ON CURRICULUM AREAS

	SCHOOLS									
	01	02	03	04	05	06	07	08	09	10
Literacy (Based on texts)	44.9	57.5	32.6	49.1	54.1	40.5	41.9	19.7	42.1	44.9
Oral Language Experience	12.2	-	-	1.9	5.7	2.7	-	20.9	16.3	13.4
Maths	13.3	17.2	12.0	18.9	8.3	12.7	18.9	14.9	9.5	6.1
Music	7.6	3.8	4.5	1.1	6.8	0.8	8.1	14.5	7.9	1.2
Science	-	-	7.5	-	14.3	12.4	-	-	-	-
Physical Education	-	6.9	8.2	8.7	-	5.8	-	-	-	1.6
Maori	-	-	-	-	-	-	-	-	-	10.9
Greetings, News and Prayers	3.8	7.3	3.7	1.1	4.3	10.8	8.1	11.6	7.1	7.3
Choosing time	2.6	-	12.0	9.4	-	-	8.1	8.0	5.6	5.7
Organisation	15.6	7.3	19.5	9.8	6.5	14.3	14.9	10.4	11.5	8.9
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Fig 1: PROPORTION OF TIME SPENT ON CURRICULUM AREAS FOR ALL TEN SCHOOLS

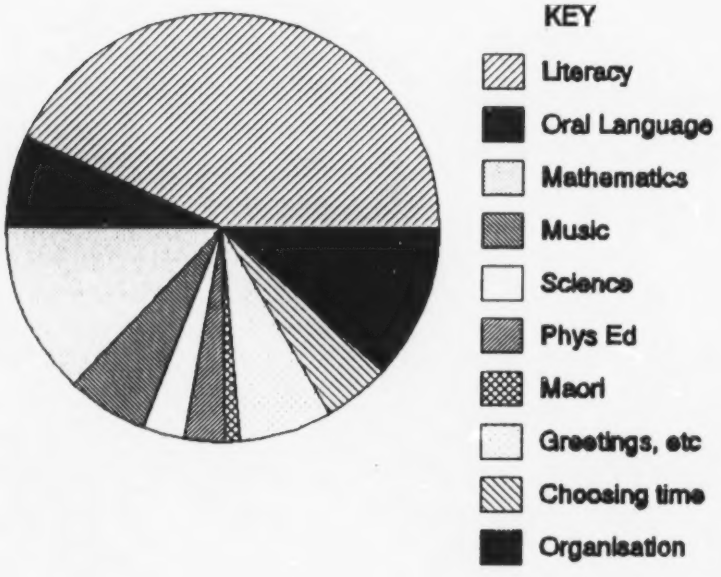
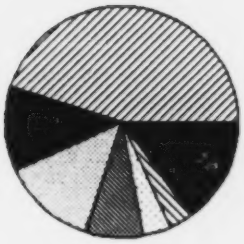


Fig. 2: PROPORTION OF TIME SPENT ON CURRICULUM AREAS FOR EACH SCHOOL



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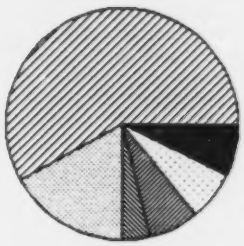

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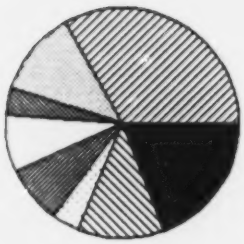
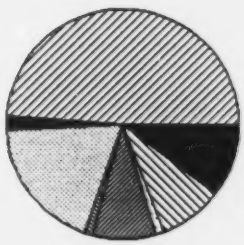
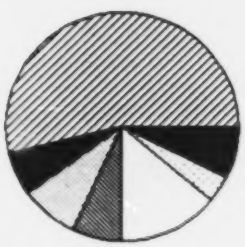


School 3



School 4



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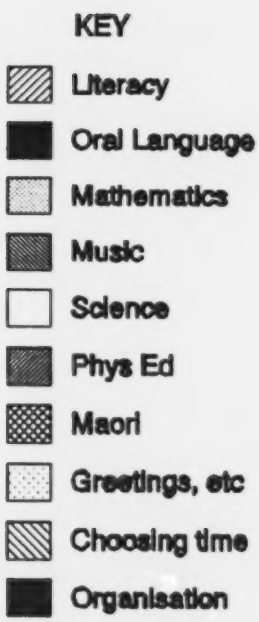

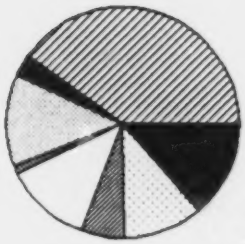

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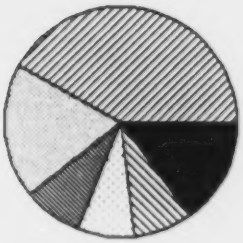

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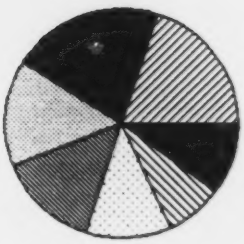
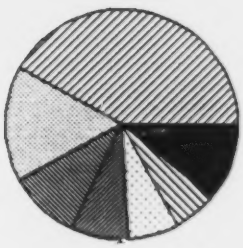
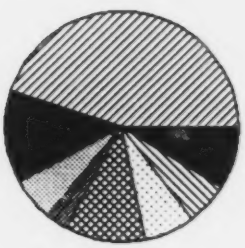


School 8



School 9



School 10

Curriculum in the Ten Schools

In Figure 2 we show the distribution of time according to curriculum area for each of the 10 schools.

Because of the nature of the junior school curriculum the classification must be, to some extent, arbitrary. On the other hand, the curriculum in each school was classified in the same way and so the schools can be compared with each other.

Also, a simple time analysis of activities does not capture the occasions when one activity is incorporated in another; for example, when texts are used in other curriculum areas such as in a chart of the words of a song used during a music session. In the same way rhymes associated with number might be presented on a chart within a mathematics session. An additional proportion of the school day is spent in activities which will later be used as the content of children's own written texts or be a follow-on experience from something read earlier in class.

It can be seen that there are variations across the schools but also a general pattern of distribution. There is variation in the relative proportions of time spent on the study or use of texts in relation to the proportion spent on oral language experience. The school which spent the greatest proportion of time on oral language (School 8) contained the greatest proportion of children for whom English was a second language. It also had the greatest number of mainstreamed children. The oral language experience was carefully planned so that all children could participate.

One school appears to have had no oral language. The explanation is that the school had group discussion dispersed through the day, in connection with different aspects of the intended curriculum.

The fact that only four schools had science is a reflection of the fact that science is not necessarily presented every day as are reading and writing (literacy), mathematics, music, greetings and news.

In the 3 schools with the least proportion of time spent in organisation the children were in single cell classrooms. However, in one single cell classroom a larger proportion of time was given to organisation. The explanation was a science lesson which involved organising children into three groups, arranging them around containers of water, distributing equipment, explaining the intention of the activity and finally cleaning up.

The reason for the large proportion of time spent on organisation in School 3 can be accounted for by the fact that the class had a relieving teacher who had started on the day of the videorecording. She was still in the process of getting to know the children. Also this particular classroom included several spaces where the children were out of the teacher's line of sight and needed to be monitored.

There is no single factor determining the amount of time spent on organisation. We could identify three factors:

* Whether the children are in a single cell or open space.

* The familiarity of the teacher with the class.

* The extent to which the teacher introduces new curriculum material or material requiring the distribution and cleaning up of equipment.

Aspects of the world are represented to, and by, 5-year-olds in two particular forms - the alphabetic code, and visual representations. Illustrations appear in texts to be read and illustrations are provided by children to accompany their own texts. Further visual representations surround the children in the form of weather charts, clock faces, alphabet charts and religious images in the integrated schools.

These visual representations are an important part of the messages about literacy. They are not captured by a time analysis. Apart from studies of gender stereotyping there appears to have been little study of illustrations in junior school classrooms. This matter deserves further investigation.

CHAPTER 7

GROUPING

All teachers made use of groups of varying size for classroom activities. The purposes for this grouping might be for any one of a number of reasons - to arrange children in ability groups, to see that resources were spread around the class, to encourage independent work and so on. Children frequently chose their own groups. One teacher explained that the group in her class were determined by the children's order of entry to school. The teachers gave no sign that operating groups was `demanding' as claimed in the article referred to earlier.

There has recently been a questioning by teachers and others of the use of small groups for teaching/learning. There appear to be two issues; whether children are in fact working in groups or merely sitting in groups and working as individuals. The second issue is whether children in groups are actually on-task and learning or whether they `end up playing'. The latter issue has been raised mainly in relation to single curriculum areas such as mathematics (e.g. Bennie et. al, 1990; Higgins, 1990; 1991)

The present study showed the following.

(1) Whether children work as a group or merely sit with each other and work independently is a consequence of the task and the type and supply of resources. There were instances where children adopted complementary roles (teacher-learner, or as a team of actors in a play) within a shared task. Certain resources such as construction materials and some BSM mateirals require two or more groupings of children to work together.

There were also contrary instances, particularly in writing events, where children sat around small tables to write their own stories and their relationship was with the teacher for the purposes of the task.

(2) Were children in groups on-task? Some were and some were not. There was considerable variation in task behaviour. In one school, for example, a group of girls took part in imaginative play pretending that they were babies yet completed the assigned maths task. In another school there was another group of girls whose play, again as babies, seemed to distract them from the maths task as assigned and

they initiated a maths activity of their own.

(3) The evidence from this study cannot resolve the question of the extent to which children learn when they are in small groups because the research model was not set up to clarify this issue. However, observation of the behaviour of children working as individuals and in a class suggested that there were children in these other organisational arrangements who did not appear to be engaged in learning. In short there were children on-task and off-task in all groupings. This is obviously an area deserving of more research and we are currently giving this issue further study.

In Table 5, ignoring the subtleties of 'grouping', we have classified children as being in one of three types of organisation; class, group or individual, and have calculated the time allocation for each arrangement across the 10 schools. These calculations were for the class apart from times when children might be in a range of groupings. In this case the grouping of the focus child or children was recorded.

TABLE 5

CHILDREN IN THEIR ACTIVITIES THROUGHOUT THE DAY (MINUTES)

SCHOOLS

	01	02	03	04	05	06	07	08	09	10
Literacy (based on texts)	36 21 *61*	39 76 *35*	15 37 *35*	46 39 *45*	18 11 *122*	43 27 *35*	26 33 *34*	7 12 *30*	52 8 *46*	35 42 *34*
Oral language Experience	32 - -	- - -	- - -	5 - -	16 - -	7 - -	- - -	52 - -	41 - -	33 - -
Maths	7 28 -	13 34 -	- 32 -	- 50 -	5 18 -	6 27 -	19 23 -	3 34 -	- 24 -	- 15 -
Music	20 - -	10 - -	12 - -	3 - -	19 - -	2 - -	18 - -	36 - -	20 - -	3 - -
Science	- - -	- - -	20 - -	- - -	40 - -	12 20 -	- - -	- - -	- - -	- - -
Physical Education	- - -	18 - -	22 - -	23 - -	- - -	15 - -	- - -	- - -	- - -	4 - -
Maori	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- 2 *25*
Greetings, News and Prayers	10 - -	19 - -	10 - -	3 - -	12 - -	28 - -	18 - -	29 - -	18 - -	18 - -
Choosing time	- - *7*	- - -	- 32 -	- 25 -	- - -	- - -	- 18 -	- 20 -	- 14 -	- 14 -
Organisation	41 - -	19 - -	52 - -	26 - -	18 - -	37 - -	33 - -	26 - -	29 - -	22 - -

KEY

x as a class
x in a group
x as an individual

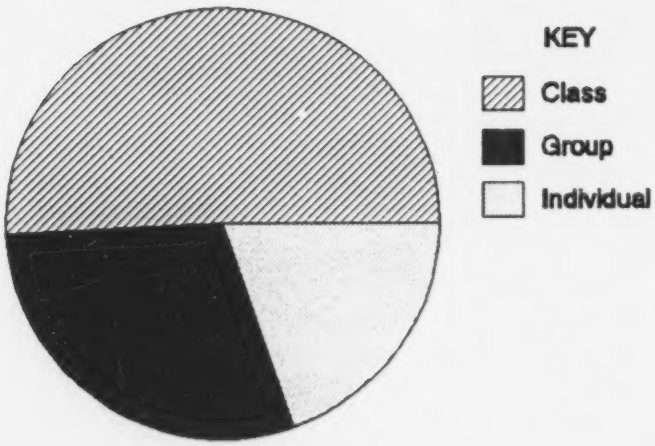
The relationship between group type and curriculum area is obvious. Literacy (based on texts) is the only curriculum area in which all three types of classroom organisation were observed.

Figure 3 shows the average proportions of time according to group size based on the 10 schools in the study.

It can be seen that, on average, children are in a whole class grouping for approximately half the day.

The issue of which kind of grouping is best for learning is probably impossible to answer in any absolute sense. The curriculum area, the supply of resources, the ages of the children, the purpose of the grouping, must all be taken into account and not just the size of the unit in which children are placed.

Fig 3: GROUPING FOR CHILDREN THROUGHOUT THE DAY FOR ALL TEN SCHOOLS



REFERENCES

BENNIE, N.; HENRY, E. and RATCLIFF, B. (1990). *Beginning School Mathematics : A Study of the Implementation*. Wellington: Ministry of Education.

HIGGINS, Joanna (1991). *Peer Interactions in the Junior Mathematics Classroom*. Paper presented at NZARE Annual Conference, 28 November - 1 December, Knox College, Dunedin.

HIGGINS, Joanna (1990). *The Ethnographic Approach to Classroom Research*. Paper presented at the 3rd International Conference on Teaching Statistics.

CHAPTER 8

LEARNING AND TEACHING SCHOOL WAYS OF THINKING

All the teachers we observed provided children with cultural capital regarding:

* What to think about.
* How to behave.
* How to think.

The first of these - what to think about - is incorporated in the subjects of the school curriculum - writing, reading, science, mathematics and so on. Because texts are always about something, what to think about is also revealed in the content of the texts that children read. How to behave is overtly linked by teachers to how to think. How to think is not an isolated subject. Ways of thinking are taught along with subject matter. Subject matter cannot be taught without demonstrating how it should be thought about. The ways of thinking encouraged in the classroom are not those normally found in everyday life (e.g., in family discourse) although, as Phillips and McNaughton (1990) have shown, school ways of treating texts may be incorporated by families into storybook reading. In the classrooms we videorecorded teachers frequently drew the children's attention to thinking as an activity. For example, during a physical education lesson the teacher said:

10:13 Some people are really thinking today.

(Some time later she said:)

10:20 I can see people working really well today.

Teachers associate the process of `thinking' with concepts of the `work' of the school and identify both as desirable or `good' behaviour. In this way they interpret `thinking' and set it in a scale of values.

The analysis of `thinking' in the classrooms which were observed was informed by three strands of research. The first consists of studies of the role of written texts in permitting or encouraging certain forms of thinking (e.g., Goody, 1968). The argument is that unlike oral presentations, written texts give the reader time to manipulate the statements within them and because written texts stay the same the reader can return again

and again to study them and determine their deeper meaning. Written texts, so the argument goes, resulted in the historical development of logic as the study of reasoning. However, in a well known study, Scribner and Cole (1978) have demonstrated that literacy alone is insufficient to produce `intelligent' thought (as this is defined, for example, in tests of intelligence or general mental ability) and that individuals need also to have attended school. Therefore, it is school ways of thinking which are important.

The second strand comes from studies of changes in the expected standards of reading over time. For example, Resnick & Resnick, (1977) have pointed out that what is considered a functional level of literacy is a result of the standards required at any particular historical time. It is possible for many people to be considered functionally literate if it is sufficient to be able to read aloud when presented with familiar material. Fewer people would be called literate if the test requires the reading of unfamiliar material and fewer still called literate if the measure is to draw implications from unfamiliar material. Drawing inferences from unfamiliar material is a modern interpretation of literacy.

It has been demonstrated (de Lemos, 1990; Cahan and Cohen, 1989; McDonald, 1991; 1992) that group-administered tests of general ability measure the effects of class level. If this is so then it should be possible to observe school children learning `intelligent' ways of thinking as these are interpreted in the items of group tests of general ability. And because, as already noted, written texts have been identified as the way people in western society come to reason and think logically one should expect this learning to take place during the study of written texts in school.

The Junior School Study videorecords show that on entry to school 5-year-old children are introduced to ways of extracting meaning from texts. This should not surprise us because the methods of reading used in New Zealand are aimed at `going beyond the text' and `reading between the lines' (Mooney, 1991, p.13). Reading for meaning using specific techniques of thinking of the kind found in group tests of ability is particularly apparent when junior school children are gathered together in a large group for shared reading under the control of the teacher.

How to Think

Jerome Bruner has suggested the idea of `scaffolding' to describe how mothers help their infants to learn to talk. `Scaffolding' consists of the props and supports which mothers provide so that their children can master language. In a parallel manner, teachers of new entrants scaffold children's thinking in a variety of ways that are particular to education in school. Such academic thinking is not present or expected in all classroom activities. It does not appear during the process of organising

children into groups, preparing them for an activity, or for going home or out to play. The kind of questions teachers ask during the presentation of a curriculum area such as music or physical education are different from the questions asked during the study of written texts. Scaffolding occurs most often where the teacher reads with a large group and she initiates the discourse.

The written text is the basic organising device in five-year-old classrooms. For example, children may talk about their experiences and that serves as a script to be converted to text by the teacher, or by a group of children, or by the child. Texts may be read aloud by the teacher and discussed by the children. Children write their own texts and read them to others. Teachers hear individual children read aloud, and question them about the implications of the text.

Teachers explore with children the meanings of written texts (the negotiation of direct meaning). The teachers we observed also taught children how to think by using anomaly (trying to 'trick' the children), using the Cloze technique (leaving gaps in sentences for the children to fill in), providing scrambled words for sentence building, encouraging deductive reasoning 'if...then', inviting comparisons, and getting children to concentrate on the principles of thinking involved in solving problems. These techniques are the very ones needed in tests of intelligence.

> The items in a group administered test of mental ability include analogies, synonyms, word meanings, sentence comprehension, alternative words, run-on-sentences, definitions and dis-emvowelled words.
>
> (Reid, Jackson, Gilmore and Croft, 1981)

Techniques of this kind can be observed in the excerpts from the transcripts reproduced below.

Although teacher-led reading sessions were the main methods of encouraging the particular forms of thinking taught in school and typical of group tests of general mental ability, scaffolding of different kinds can be observed in other activities. For example, children often asked the teacher for individual help with their writing. In response the teacher might help the child to work it out for him- or herself. Lessons in Maori, whether incorporated in greeting rituals or as a special session (as in one of our schools) are oral presentations. They do not involve texts and so do not lend themselves to methods of reasoning which are dependent on a written text. But various other forms of scaffolding are present such as rhythm and repetition and setting phrases into conversational exchanges between two people.

Mathematics provides the opportunity for teachers to teach children how to think about facts relating to number, shape and space, prediction, the handling of data, and the representation of mathematical relationships. The most frequent kind of scaffolding observed in this study occurred when teachers helped

children to define the criterion characteristics of sets of objects (one of the activities in BSM).

Examples of Scaffolding

In the following illustration the teacher scaffolds an entire activity (independent reading) by defining what it is and what it is not. Notice how a child contributes to the narrative.

9:32 Teacher: When you are doing independent reading you are only by yourself or one other person. You are not playing games, you are reading either the book from that table there, the shared books, little books...
Child: And the big books.
Teacher: ...the big books, the listening post which I'll choose some people for in a minute.

In the following extracts taken over a period of about one hour at one school several things are happening. Various forms of scaffolding are employed, the work ethic is being inculcated and at least one child recognises his own moral worth.

9:15 Teacher reads *Hairy MacLary from Donaldson's Dairy. (The children are familiar with this story by Lynley Dodd. New entrant children fill in gaps which the teacher leaves in the narrative.)*
Teacher: Hairy MacLary *(pauses)*
Child: ... from Donaldson's Dairy.

The text itself with its repetition leads to use of the Cloze technique which is probably the simplest and most basic of the scaffolding techniques.

9:19 Teacher reads *Harry by the Sea*.

This story is not based on repetition but in the transcript there are examples of children filling in gaps at the end of sentences even when the teacher does not leave any gaps. An example follows:

9:20 Teacher reads: `Help, help', she shrieked. `It's a sea monster!'. A child says, `It's a sea monster', overlapping with the teacher's speech.

9:24 A teacher asks a comprehension question by getting children to make predictions.
Teacher: He jumped so much that... what happened?
Child: Seaweed fell off. *(This child used an illustration in the text to provide a clue to the answer).*

9:37 Teacher reads *Grandpa* (Ready to Read Series).
The teacher leaves one word gaps at the end of grammatical segments. The text is rhymed and so the sound of one word provides a scaffold for the matching word.

9:51 Identifying the beginning letters of a word. Children are to put their hand up if their name begins with the same letter as one

presented by the teacher.

9:54 The teacher defines the word 'spine' as in 'spine of book'. She relates it to the children's own spines.
She discusses the meaning and use of a question mark.

9:55 Encourages children to use more than one source of information (illustration, word, guessing the story, own experience) when they read.

10:00 Writing.
The task is to copy a short statement underneath the teacher's writing and to illustrate this by drawing a wasp.

10:03 The teacher provides the scaffolding for setting up the task.
Teacher: Name on it first. Top - in the corner.

10:04 Teacher: What happens if there isn't a pencil in the tin? You go and look for another, look in another tin.
(As they write children concentrate on the first letters of their own name. Children have been drawing a wasp.)

Child No. 1: I've finished mine I'm a good kid. I'm a good kid.
Child No. 2: Now colour it in.

The manipulation of ideas illustrated in the preceding passages depends greatly on the context provided by a written text together with its format, punctuation and illustrations. Five-year-old children are also introduced to decontextualised thinking. An example can be found in the teaching device of anomaly or trying to trick the children or catch them out.

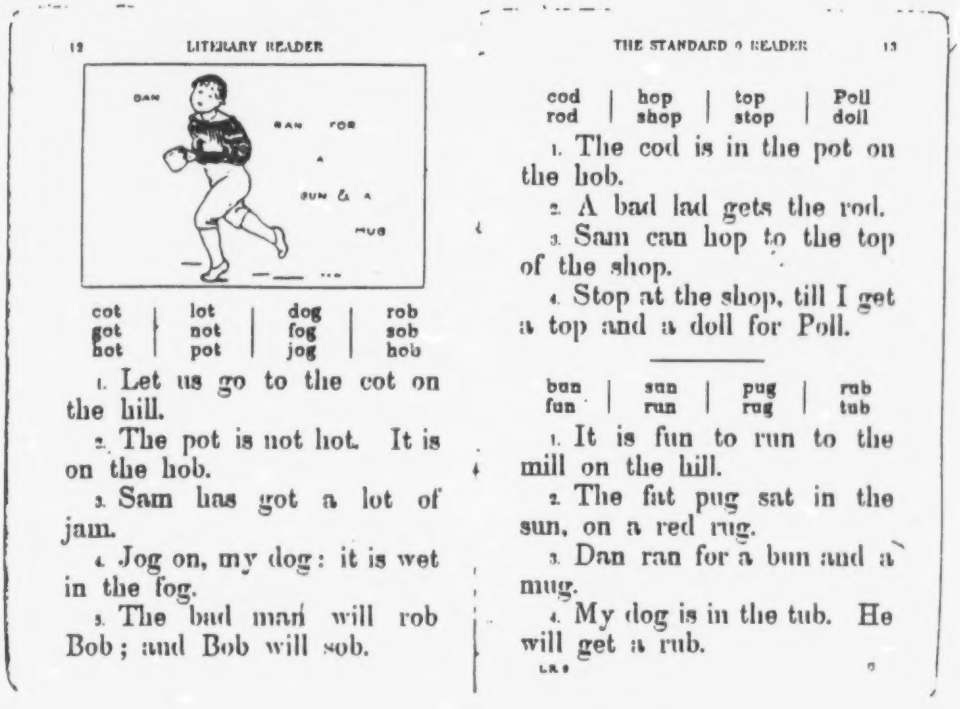
11:03 Teacher is preparing to read a text suited to the emergent stage of reading.

Teacher:	Yes, very good. I'm very pleased. Right, please put *(teacher whistles for attention)* please put your folders behind you. Thanks. This is a poem that lots of people know.
Child:	I know this one.
Child:	Had it.
Teacher:	And, ssh, I know. And it's about a fantail, isn't it?
Child:	We've had this one.
Teacher:	What's a fantail? Shannon's got her hand up, good girl.
Shannon:	Um, um. The um, they are those ones.
Teacher:	That's right. Jessie. Hurry. A fantail is a little cat just like this.
Child:	It's a bird.
Teacher:	No, it's a cat.
Child:	It's a bird.
Child:	Fantail, fantail!
Child:	Not a cat.
Child:	A bird.
Teacher:	Ian, cat or a bird?
Ian:	Fantail.
Teacher:	Is it a cat or is it a bird?
Ian:	Bird.

At the end of this event the children understand that a fantail is not a cat. It is classified as a bird. They also understand the teacher's technique of forcing a choice in order to elicit this understanding. Shannon's answer 'they are those ones' depended on the context provided by the illustration. Ian worked out that a fantail was a bird and not a cat. The device also served to focus children's attention on the task.

The 1904 syllabus for 5-year-olds prepared by Gorge Hogben is not fundamentally different from the present day reading curriculum. However, methods of teaching reading have certainly changed and New Zealand children are expected to draw inferences from unfamiliar material. But at the beginning of their schooling, children are helped in this skill through the processes of scaffolding. The Ready to Read (Learning Media) series written by real authors lends itself to the scaffolding of reasoning.

In earlier times greater emphasis was usually placed upon reading aloud - a custom associated with Bible reading. But methods of reading which depend on texts designed to practice the sounds of words do not lend themselves so readily to comprehension questions. It is rather difficult to extract deeper meaning from the sentences in the 1898 reading book (MacMillan, 1898) two pages of which are reproduced below.



12 LITERARY READER

cot	lot	dog	rob
got	not	fog	sob
hot	pot	jog	hob

1. Let us go to the cot on the hill.
2. The pot is not hot. It is on the hob.
3. Sam has got a lot of jam.
4. Jog on, my dog: it is wet in the fog.
5. The bad man will rob Bob; and Bob will sob.

THE STANDARD 9 READER 13

cod	hop	top	Poll
rod	shop	stop	doll

1. The cod is in the pot on the hob.
2. A bad lad gets the rod.
3. Sam can hop to the top of the shop.
4. Stop at the shop, till I get a top and a doll for Poll.

bun	sun	pug	rub
fun	run	rug	tub

1. It is fun to run to the mill on the hill.
2. The fat pug sat in the sun, on a red rug.
3. Dan ran for a bun and a mug.
4. My dog is in the tub. He will get a rub.

There is plenty of evidence that 5-year-olds, a teacher and a text constitute a setting for learning to think intelligently as this is defined by the school and by group tests. From the time

of entry to school our children are introduced to problem solving skills in the reading of texts. The process is at first scaffolded by text illustrations and teacher prompts. As they become independent readers children are expected to operate on the written text alone in order to fathom its meaning. So they learn to use meaning to elucidate text and they learn to use text to discover meaning.

REFERENCES

CAHAN, Sorel and COHEN, Nora (1989). Age Versus Schooling Effects on Intelligence Development. *Child Development*, 60, 1239-1249.

DE LEMOS, Marion M. (1990). *The Raven's Progressive Matrices: Does Schooling Make a Difference?* Paper presented at the Australian Psychological Society's Silver Jubilee Conference, Melbourne, 23-28 September.

DEPARTMENT OF EDUCATION. (1985). *Reading in Junior Classes, with guidelines to the revised Ready to Read series*. Wellington: Department of Education.

GOODY, Jack (ed.) (1968). *Literacy in Traditional Societies*. Cambridge University Press.

McDONALD, Geraldine (1992). Henry and Iain : Final Word. *New Zealand Journal of Educational Studies*, 27:1. (In press)

McDONALD, Geraldine (1991). Henry and Iain Meet the PAT Age Percentiles. *New Zealand Journal of Educational Studies*, 26:1, 65-73.

MacMILLAN (1898). *MacMillan's New Literary Readers : Standard 0*. London : MacMillan & Co, Ltd. (Hugh Price Collection).

MOONEY, Margaret (1988). *Developing Life-long Readers*. Wellington : Department of Education.

PHILLIPS, Gwenneth and McNAUGHTON, Stuart (1990). The Practice of Storybook Reading to Preschool Children in Mainstream New Zealand Families. *Reading Research Quarterly*, 25:3, 196-212.

REID, N.A.; JACKSON, P.; GILMORE, A., and CROFT, A.C. (1981). *Test of Scholastic Abilities : Teacher's Manual*. Wellington : NZCER.

RESNICK, Daniel P. and RESNICK, Lauren, B. (1977). The Nature of Literacy : An Historical Exploration. *Harvard Educational Review*, 47:3, 370-385.

SCRIBNER, Sylvia and COLE, Michael (1978). Literacy Without Schooling: Testing for Intellectual Effect. *Harvard Educational Review*, 48:4, 448-461.

CHAPTER 9

HOW TO BEHAVE

How to behave covers both the behaviour required to make the class run smoothly and the behaviour desirable in the wider world. It also involves defining what counts as good behaviour and what as bad.

We shall look briefly at the syllabus for 5-year-olds at the turn of the century, then at the document *A National Curriculum for New Zealand* (1991).

Hogben's syllabus required that moral instruction... should dominate the spirit of the whole school life...

> order, punctuation, regularity, industry, cleanliness, clear talk, pure minds.., truthfulness, honest work, self-control, government of temper, patience, perseverance, moral courage, temperance... reading of good books, choice of amusements, readiness to learn from all, duties to others, to parents, to the family, to those in misfortune..., toleration of others, gratitude... [and so on for quite a while!] (NZ Government, 1907)

The National Curriculum of New Zealand has this to say about Social Skills:
The curriculum will enable all students to:

* relate easily to others, and work in co-operative ways to achieve success;
* take responsibility for the well-being of others and of the environment;
* develop desirable social qualities such as integrity, reliability, trust, fairness, and courtesy;
* participate effectively and productively as responsible and informed citizens of New Zealand's democratic society and economy.

Hogben's list is more prescriptive. It also includes matters such as self-control which in today's curriculum is packaged under `self-management skills'. Hogben's list omits care of the environment which is in the modern curriculum statement. However, with minor exceptions such as `temperance' Hogben's list is still appropriate. Watching classrooms convinced us that teachers would be largely in agreement with Hogben's list.

Hogben did not advocate direct moral instruction but rather that behaviour should be acquired through the influence of suitable texts. The National Curriculum describes social skills as essential or generic skills operating across the curriculum.

In all schools, teachers encouraged their pupils to behave well, not just within the classroom, but as members of society. In our 10 schools all the teachers provided `moral instruction' by deriving examples of good behaviour from children's narrative accounts as in `news', by evaluating the behaviour of characters in texts, by encouraging the sharing of physical resources such as pencils, by arranging for one child to assist another with reading, by devices designed to encourage self-control such as `eyes on me' and so on. In 2 of our schools moral instruction/social skills was linked to religious observance and reference to God. This linking took place at various times during the day both formally and incidentally. In another of our schools, moral instruction/social skills was linked to formal religious observance at the beginning and end of the day. In the other 7 schools the same moral attitudes were encouraged e.g., care of the environment, care of others, but were treated as separate from religion.

Teachers use many techniques to manage behaviour in the classroom. In the following extract one teacher is reporting to another on the work of her maths group.

> 14:25 My oblongs, Mrs Prentice. My oblongs worked by themselves for all of maths, beautifully. They did beautiful work, they tidied up beautifully, and they worked quietly. That's their chart there, I left it out to show you.
>
> 14:55 Children talking.
> Teacher claps three times.
> Teacher: Um, Ricky, move. I'm sorry but I can't stand that noise. Everybody come and sit on the mat very quietly please. Shirley, could you please help him out.

Teachers all engaged in moral instruction of the kind that would have been familiar to George Hogben. Children were encouraged to show kindness, cheerfulness, and care for other children.

Orderly starts to the day were, in most classes managed by rituals of greeting between children and the teacher, and children and other children. In some morning `ceremonies' one child told another child some news. In others Maori and other languages were incorporated into the greetings. In the integrated schools children prayed to God thanking Him for some benefit or asking Him to intercede on behalf of someone else. In the private school there was a school assembly which included singing and prayers.

Texts were used to make moral points. For example in one school the teacher read `The Frog Prince' to the class and at the end asked the children to say what they thought of the behaviour of the princess who had at one point thrown the frog against the

wall in her bedroom. (That was when he was trying to get into her bed!) The children decided that the princess was cruel.

Teachers drew attention to the environment and described how to care for plants and, similarly, they made children aware of the need for kindness to animals - such as frogs!

While there was considerable emphasis on co-operation in learning and children helping each other there was an equal emphasis on being responsible for one's own work.

> 11:37 Teacher: No don't tell her Judith. She knows. Come and I'll help you Lucy if you're stuck.
> *(To Judith)* You're not to help.
> It's not Lucy's work if you tell her.

The behaviour most commonly described as `good' occurred when children answered questions correctly. Thus `intelligent' thinking was being attached to moral worth and creating a package of values, thinking techniques and content.

REFERENCES

MINISTRY OF EDUCATION. (1991). *A National Curriculum for New Zealand*. Wellington : Learning Media.

NEW ZEALAND GOVERNMENT (1907). Education : Conference of Inspectors of Schools and Principals of Training Colleges, E.1E.

CHAPTER 10

CHILDREN COMMENT ON SCHOOL AND THE CURRICULUM

Child interviews were carried out following the videorecording and over the period from December 1989 to April 1990. Of the original sample of 35 children, 2 had moved to another school by the time of the interview. One very reserved child was not interviewed. There were 32 usable records from the interviews. The interviewers asked the children to talk to puppets or toys. A few children objected to these objects and they were not used with them. One child refused to have the taperecorder and so the interviewer took notes by hand. The interview was loosely structured and the set of questions relevant to this cross-sectional study were those which elicited from the child his or her perception of the school day, of maths, reading, writing, good and bad behaviour, and the concept of progress at school. This kind of information was elicited in response to questions about what school is like, about curriculum areas and about the kind of behaviour which is praised or punished by the teacher.

Young children store regular events in their minds as *narrative scripts* in which key features over a period of time are recalled in chronological order. The interviews produced some of these mental scripts as children described their school day or some elements of it. These descriptions are not of any one time but are generalised statements. They differ from other utterances in that they appear to be built up on the basis of repeated personal experience rather than through the adoption or adaptation of statements made by signficiant others in their social world.

Some other characteristics of the children's responses can be noted. A number said that, `Maths is hard'. In another part of the interview they might refer to maths as `games' and later say that they were good at maths. These seemingly contradictory statements can be explained if we assume that `maths is hard' is a general judgement perhaps acquired from the beliefs of family or peers while `games' and being `good at maths' refer to the child's own experience. The generalised statement is acquired as a cultural understanding and the specific statement is acquired through personal experience.

The child's interpretation of the interviewer's questions sometimes revealed that the child misinterpreted the interviewer's word or words. For example, `What is it like coming to school?' was answered by two children as referring to

the journey to school. One boy confessed that he was worried about the bus and wasn't quite sure where to get off. It was also common for children to respond to one part a question rather rather than the whole question. An example: `Are you good at...?' being interpreted as `Are you good?'.

The Status of the Child Interview Data

The children's answers were not collated according to particular questions as one might do with the responses from an interview with an adult. Nor were the answers treated as true or untrue, `real' or not, but rather as showing how a group of children interpreted schooling and gave it personal meaning. The collective responses revealed the elements of the children's understanding in the form of descriptions, value judgements and personal feelings. When talking to the interview toys some children offered handy hints about how to survive at school. The ages are those at the time of the first interview.

School

Play in the playground and the importance of friends came through very strongly. Following is a narrative script about the way the school day is ordered.

> It's good and sometimes there is playtime. When the school starts and when somebody get there first, you've got to wait until the bell goes and then you can go upstairs and then when the next bell goes -you've got to wait until the next bell goes - and then you go zoop. (Boy 5:4)

There were many answers which outlined the general work of the classroom.

> I do maths work, do some printing and I do my reading and I do some singing and some maths and some work. (Boy 5;2)

> I like playing with trains and puppets and dress up and outside playing on the swing and we have got a slide outside. (Girl 5;6)

> You sing songs and read your book. You have lunch and play. We go to the library and we jog. (Boy 5;4)

Some children reported their understanding of the processes of learning.

> I learn how to read. You learn to read words that you haven't learned yet and you get better and better at it....
> And we learn Maori which used to be my old language. We used to have it at Kohanga.
> Interviewer: Are you good at speaking Maori?
> Almost. Yesterday at Maori I said all the words. The word for clock is `karaka' and pig is `poaka'.
> I know some colours but I've forgotten the names'. (Boy 6;2)

Others outlined the organisation and rules of activities.

> (Music)
> Oh we're singing all sorts of songs and we have to not talk when we're doing singing. (Boy 5;3)
>
> (Children reported what they enjoyed)
> I like playing with toys. I like playing around the swings. (Girl 5;4)
>
> (Inside the classroom)
> Puzzles, and dress-ups, and blocks and books and other things. (Girl 5;8)

Some spoke of activities that had made a special impression on them.

> Going to do a play - just now... about a ghost... No - its three people and um two girls are the ghosts. I'm going to be one of them - there will be one rooster and one ghost and I'm going to be just a lady. (Girl 6:4)

Another child, a boy, spoke about making calendars. An Indian child gave the following answer when he was asked to say what is good about school.

> You do it and you go and get a job. (Boy 5;4)

Curriculum Areas

Reading

Children had common ideas about reading, what it entails and how one progresses. Children were asked whether they were good at reading:

> Yes... I can read any book except hard books. I can't read but the easy books. (Boy 5:6)
>
> Phonics. That's the ABCs. (Boy 5;3)
>
> I can't read yet but I can look at the pictures. All of them can read and write but they have been at school longer than me. (Boy 5;3)
>
> I don't know to read those dumb books. I have to wait until I get bigger. Because I'm too small. (Girl 5;3)
>
> I read some of my reading in Room 2 with the older kids. (Boy 6;2)
>
> I'm going on to an older group... because they have to do the things I've already done. (Girl 5;7)

In these answers we can see that the children have already grasped the idea of progress in reading. Reading gets better as you become older and bigger. Older children read better. The books too are viewed as a progression from easy to hard or according to some children from small to big.

The processes of reading were mentioned.

> I've tried to read my books and found out how to spell things. (Girl 5;7)

A boy told the interviewer that he was good at reading and explains why.

> I like doing phonics, now I've used my phonics and I've taken it home and I'm now using different things. I'm using papaer and you draw lines. (Boy 5;2)

> Some days I miss out words and some days I don't. (Boy 5;4)

Writing

First, a narrative script about writing by one of the youngest children.

> Birds and things yeah...
> Things like that and we, we write the date and find... and then we start on our birds and things. Later and then um, we, we finish them when the teacher calls out we have to um we have to go swimming but we aren't going swimming today. (Boy 5;1)

Learning is measured by type and size of letters.

> When I started school I used to do it big letters. (Boy 5;2)

> You do your picture up the top and writing down the bottom. (5;3).

> Interviewer: How do you learn to write?
> We copy off the blackboard.
> Interviewer: Did it take very long?
> No, it only took one day. (Boy 6;2)

> The teacher writes it sometimes and she write it as... and we write some of it and then the teacher comes and writes some of it and if you finish it and she don't have to come to you... and you wait and you read and you read to the teacher. (Boy 5;3).

> Just hold the pencil and write on the line. The little people draw pictures - they don't write. The big peoples and I'm the big peoples, they do the date. Little people don't do the date. We do the date... (Girl 6;4)

There were comments on the length of the stories.

> She likes my stories my book that I draw in... I read long stories to her. I read all my stories to her. We do a lot of writing and stories. (Girl 5;10)

> I hate writing. Because you have to write long stories 'cause sometimes you only write short stories and then the teacher says you have to write long ones all down the page. (Girl 5;8).

> Sometimes I don't want to do stories. I like doing small ones. (Boy 5;3)

One child said she enjoyed writing stories at home because there she had more time.

> Because I just sound out and if I'm right, then the teacher doesn't, um, cross out. But if I've done a wrong letter of something then she crosses it out.
> Interviewer: You write them down and if they're right the teacher just leaves them but if they're wrong she'll cross them out?
> Yeah or write the proper word in. (Girl 5:7).

> Yeah and she helps us, if it's a blue book and she also helps when we sometimes have to write our own and that's what I was doing when you came in. (Girl 5;7)

Some enjoy writing:

> You can write lots of good stories. (Girl 5;7)

And some do not:

> ... my pencil always breaks.
> I didn't want to write. I hate writing. Like I'm always doing mistakes and sometimes I do a mistake and I've rubbed it out and I did it in class and I say `Oh, oh, now what am I going to do?' (Girl 5:3)

The equipment can give rise to problems.

> Someone snaps a pencil...
> my black felt missing... Jason stealed them all.
> I told the teacher - he kept on this lying. (Boy 5;2)

Mathematics

As mentioned above the responses to the questions about maths were often contradictory. A child might say that maths was hard and then imply that it was games and fun and easy. One girl (5;3), however, said that maths was easy but it wasn't easy for her.

There were several explanations of the way in which maths was organised.

> It's good. All you do is get your name and you get a thing out of the box and then out the thing, and put the thing together and do the thing what you're supposed to do with it. (Boy 5;2)

> ...I try to do different activities.
> Interviewer : You've just been moved up a maths group.
> Yeah and I try and find out what they are like by asking the children that are already been in the group for a little while. (Girl 5;10)

> I play all different games. I like playing them. (Girl 5;7)

> It feels good and a bit tired. (Boy 5;2)

> We do one of those puzzles, we do one of that work or if we do the sums. (Girl 5;10)

The image of maths included boxes.

> A box is what we have all our maths games in. It's a special box with green and orange on it. (Boy 6:2)

Some children gave more detailed descriptions of maths activities.

> We play cards and we pick two cards and we have to see if we can get the same number. So I picked in the.. and we got four and four. (Girl 6;4)

> I can count them without pointing to them. (Boy 6;2)

When children have finished their assigned work they may be allowed to choose independent activities. One child said she enjoyed maths.

> 'Cause we get to do children's choice. (Girl 5;11)

It was often a particular aspect of mathematics which coloured a child's judgement.

> I really hate doing maths. Because you have got to do a four like that and I really hate doing letters, slope, slope, slope that away on a piece of paper... And this paper sloped this way and we have to let the `g' slope that way. (Girl 5;3)

Tidying up was also mentioned in connection with maths.

> Because I get my name and then I get... and I pick it all up and put it in the box and get another activity. (Boy 5;4)

One child asked how she knew she was good at maths answered:

> I can do everything... Right, like God used to tell me.

Groups

Children were organised in class groups, small groups, pairs or for individual work depending upon the curriculum area and the teacher's intentions.

There was little awareness on the part of the children that small groups might reflect levels of work although one child commented about his reading group that:

> I'm higher than the reds but some other ones are on big books. (Boy 5;3)

Children wanted to be in groups where their friends were and they didn't want to be with children who were naughty. Other problems regarding groups are suggested in the following quotations.

> I don't like it because other people in the group get to be monitor all the time. It isn't very nice because they're just need to go to the

loo all the time. (Girl 5;4)

The next quotation comes from a child who was talking about reading in pairs.

> I was reading actually to Rachel.
> Yeah I like reading to a friend cause you can read just to yourself or to a friend. (Girl 5;7)

Aspects of Organisation

One of the features of five-year-old children's interpretations of their school experience is how these are defined by specific locations (`hall' for `physical education') or objects (the boxes which store resources) and how not knowing the location of a resource becomes a barrier to participation.

> I would like to be in the bottom drawer [for reading] because I'll read all the books in the turtles. (Boy 5;2)

> I don't do painting. I don't know where the painting paper is. (Boy 5;3)

Order is frequently represented by the colour of objects.

> But I read baby books, then red books and then yellow books. It didn't take long on yellow. Then I had blue and now I'm on green like this green. (Boy 5;2)

One teacher helped her children to organise themselves by writing outlines of how to carry out various activities. A child in her class described this as follows:

> We have little cards which are stuck up on charts and then we read them and we can do them in different orders. (Boy 6;2)

Finally a bit of advice from a child to a toy used in the interview. It is about how take part in singing.

> You get a copy of the words - and he doesn't know - he can just listen to what other people say. (Boy 5;4)

THE JUNIOR SCHOOL STUDY

TO THE CAREGIVERS

The New Zealand Council for Educational Research is making a study of junior schools. The aim of the project is to find out how children from different schools experience their school day, how they make use of classroom resources, how different classrooms are organised and how children are being assessed. This project will be completed in another three years.

The Principal and class teacher are happy for us to visit your school once a term and record on video a day in the classroom. The camera will record the class, small groups and individual children. We will also select four to five children at random from the class and follow their progress through the junior school. The video recording will only be used for research purposes and all information will be considered confidential.

If you are happy for your child to be included in the group of randomly selected children please sign the form below and return it to the school. If you have any questions regarding the research project you are welcome to contact Joanna Kidman, Cathy Wylie or Geraldine McDonald at NZCER, our telephone number is 847-939.

Dr Geraldine McDonald
Dr Cathy Wylie
Joanna Kidman

New Zealand Council for Educational Research
Junior School Study

I am happy / I am not happy (delete one) for my child to participate in the Junior School Study.

(your signature) .....

OFISA O AOGA MO LE SAILILIGA O MEA E MANAOMIA E ATINAE AI AOAOGA A LE FANAU

O le a faia e le ofisa o Aoga se suesuega o le fanau iti i aoga tulagalua. O le faamoe moe o lenei suesuega.

i) O le fia malamalama i tamaiti mai aoga eseese ma lo latou aoaoina i lea aso ma lea aso.

ii) O le faaaogaina e tamaiti o resources i totonu o potuaoga.

iii) Auala e sailia ai le taumafai o tamaiti
E tolu tausaga le umi o lenei suesuega.
Ua faaalia le ogaga fiafia o le susuga i le Alii Fule ma faiaoga i se matou talosaga e faaauau ai lenei suesuega i totonu o le aoga, ma e faatasi ona matou auai atu i le vaituaga.
E faaaoga ai video e pue ai aoga a tamaiti i totonu o a latou vasega, faapea ma tamait taitoatasi. O le a filifilia ai e le Ofisa o Aoga ni tamaiti se toa 4, 5 mose suesueg o le latou taumafai mai le amataga seia oo ina ua manuia le aoaina i lea lava vasega. O sailiiliga uma o lenei suesuega o le a teuina lea i totonu o le Ofisa.

Afai e te fiafia e auai lou alo i le vasega o tamaiti o lea filifilia mai e le ofisa, faamolemole saini ane i le vaega pito i lalo ma faafoi ane i le aoga. Afai foi e i ai se faafesili e faatatau lava i lenei polokalame, e mafai ona faafesootai Joanna Kidman, Cathy Wylie po o Geraldine McDonald i le telefoni numera 847.939

Dr Geraldine McDonald
Dr Cathy Wylie
Joanne Kidman

OFISA O AOGA MOLE SAILIILIGA O MEA E MANAOMIA E ATINAE AI AOGA A LE FANAU

Ou te fiafia/Ou te le fiafia i le auai o lou alo i le suesuega i aoga laiti

Sainia

AKO MAAE NGAAHI LAUTOHI

E ʃai he kautaha Fekumi maae ngaahi lautohi Sii a Nuusiia ki ha ako ʃekauaki moe ngaue ae ʃanau ako. Koe tauʍua oe ako ni ke ʃekumi pe oku anga ʃeʃe ngaue i he Api Ako i ngaue aki ae naunau ako 'i he ʃale ako', pea moe anga ehau ʃakaʃuoʃua i he loki ako'.

E ʃeunga é ako ni mo e taú é tolu.

Oku ʃieʃia ãupito e Tule Ako moe ʃaiako ke nau aahi mai tuo taha he taemi mo ʃaitai vitio ae anga e ngaue ae ʃanau ' i he loki ako'. E ʃaita vitio ʃakakalasi, ʃakakuluʍu moe ʃakatauitaha ʃoki. E ʃili ʃoki ha ʃoi toko ʃa pe nima mei he kalasi ke ʃaita vitio e anga enau ngaue i loki ako mo ako ki he ʃakalakaʃaka enau ngaue i api ako i he lolotonga enau i he lautohi. E ngaue aki pe ae ʃaita vitio ki he ngaahi mea ʃaka ako pe.

Kapau oku ke loto ke kau hoo kii tamasii i he ʃaahinga e ʃili he ako ni pea ke ʃakamoʊni he ʃoomu i lalo o ʃakaʃoki mou ki hi api ako. Kapau oku ke ʃiemau ha ʃakamatala o ʃekauaki mo e ako ni pea ke kataki o ʃetuutaki kia Joanna Kidman Cathy Wylie pe ko Geraldine McDonald i he NZCER pe koe teleʃoni ʃika 847.939.

Oku ou loto / ikai loto ke kau eku tamasii i he ako ni.

Fakamooni : _____

Technical Equipment

The videorecording was carried out by means of a Hitachi Camcorder VM 600E, and a directional microphone. The camcorder has an in-built microphone, a zoom lens and facility for recording when backlighting is present. It can record even when the light is dim. It operates on either batteries or mains power. A time line in minutes is recorded along with the visual image. The camcorder is used for the most part on a Manfroto #2 tripod, but a clip allows it to be readily lifted from the tripod and taken to another position. The images were recorded on to 3 hour VHS tapes. One was used for the morning and another for the afternoon.

The playback equipment consisted of a National video cassette recorder NV777 and a National Quintrix monitor screen with earphones. The video cassette recorder can be operated by remote control. The equipment allows the tape to be advanced at variable speeds including frame-by-frame and has a reasonably steady `freeze frame'. The transcriber watched the tape and listened through earphones.

The operators were trained in the use of the equipment by Julian Ward of the Wellington College of Education.

When the recording at each school was completed, two duplicate tapes were made by Julian Ward. One duplicate is kept at NZCER together with the original, and this duplicate is used for analysis. The other was given to the teachers whose new entrant classes had been recorded. The mint copies are stored as backup.